APRIL
1952

Oil Heat
Show
Issue

fueloil & oil heat

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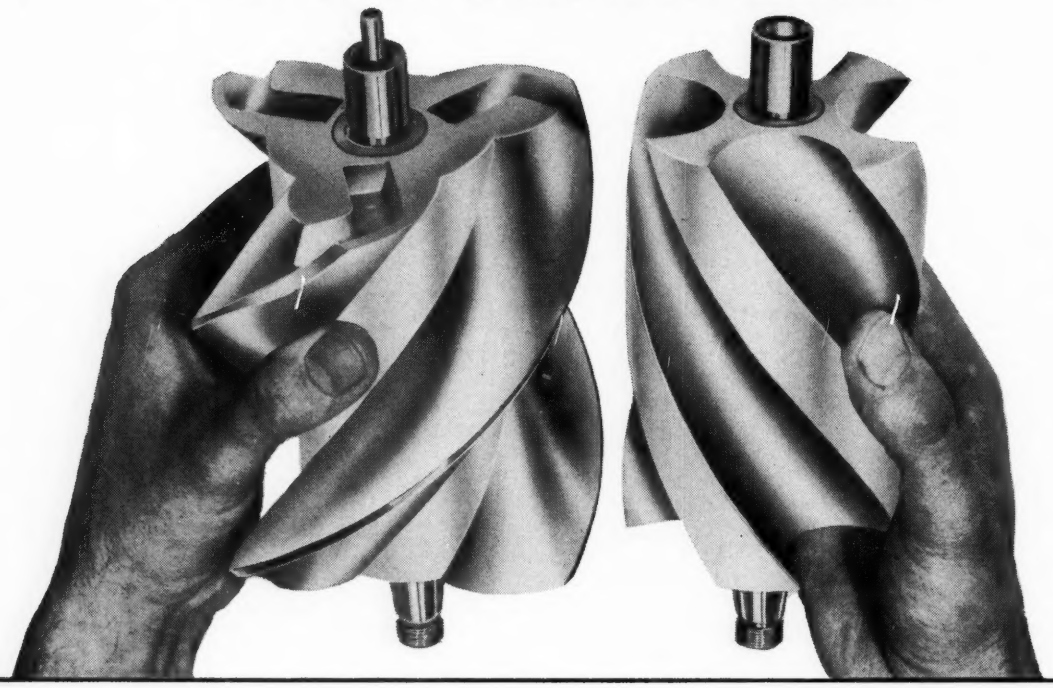
No metal-to-metal contact

AVOIDS WEAR AND REPAIR



Specify Brodie BiRotor—the meter with the replaceable measuring unit.

OF BRODIE *BiRotor* MEASURING UNITS

- With just two moving parts in Brodie BiRotor measuring chamber—there's no metal to metal contact . . . no mechanical friction . . . no complicated mechanisms to wear or need repair.
- Smooth vibrationless performance with static and dynamic balance further insures long trouble-free service life.
- Completely self-contained and readily interchangeable measuring unit permits quick change-over, inspection and servicing—without disturbing meter housing or line connections.
- Welded all-steel housing resists external and internal shocks or impacts—avoiding damage and leak hazards.

Brodie BiRotor Meters withstand long periods of steady and constant use with virtually no signs of wear. They're really built to take it. For maximum service and minimum trouble in petroleum metering—standardize on Brodie BiRotor—*the meter with the replaceable measuring unit.*

BRODIE ALL-STEEL BiRotor TRUE-ROTARY METERS

RALPH N. BRODIE CO., INC. • 61st & LOWELL STREETS, OAKLAND 8, CALIFORNIA, U.S.A.

Division Offices: 550 SO. COLUMBUS AVE., MT. VERNON, N. Y. • 59 E. VAN BUREN, CHICAGO 5, ILL. • 302 SO. PEARL STREET, DALLAS, TEXAS
221 9th AVE. N., SEATTLE 9, WASH. • 5401 E. SHEILA STREET, LOS ANGELES 22, CALIF. • *REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES*

APRIL fueloil & oilheat 1952

VOLUME 11 NUMBER 4

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YEARLY: $3.00

CANADIAN: $4.00

SINGLE COPY: 50¢

MEMBER CCA

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PUBLISHED MONTHLY
BY HEATING PUBLISHERS, INC., PUBLICATION OFFICE: 109 MARKET PLACE, BALTIMORE 2, MD. EDITORIAL AND ADVERTISING OFFICES: 2 WEST 45TH ST., NEW YORK 36, N. Y. ESTABLISHED 1922.
NEW YORK TELEPHONE: MURRAY HILL 2-4786
ENTERED AS SECOND CLASS MATTER AT THE POST OFFICE AT BALTIMORE, MD.

LEOD D. BECKER, *Chairman, Board of Directors*

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Among other things . . .

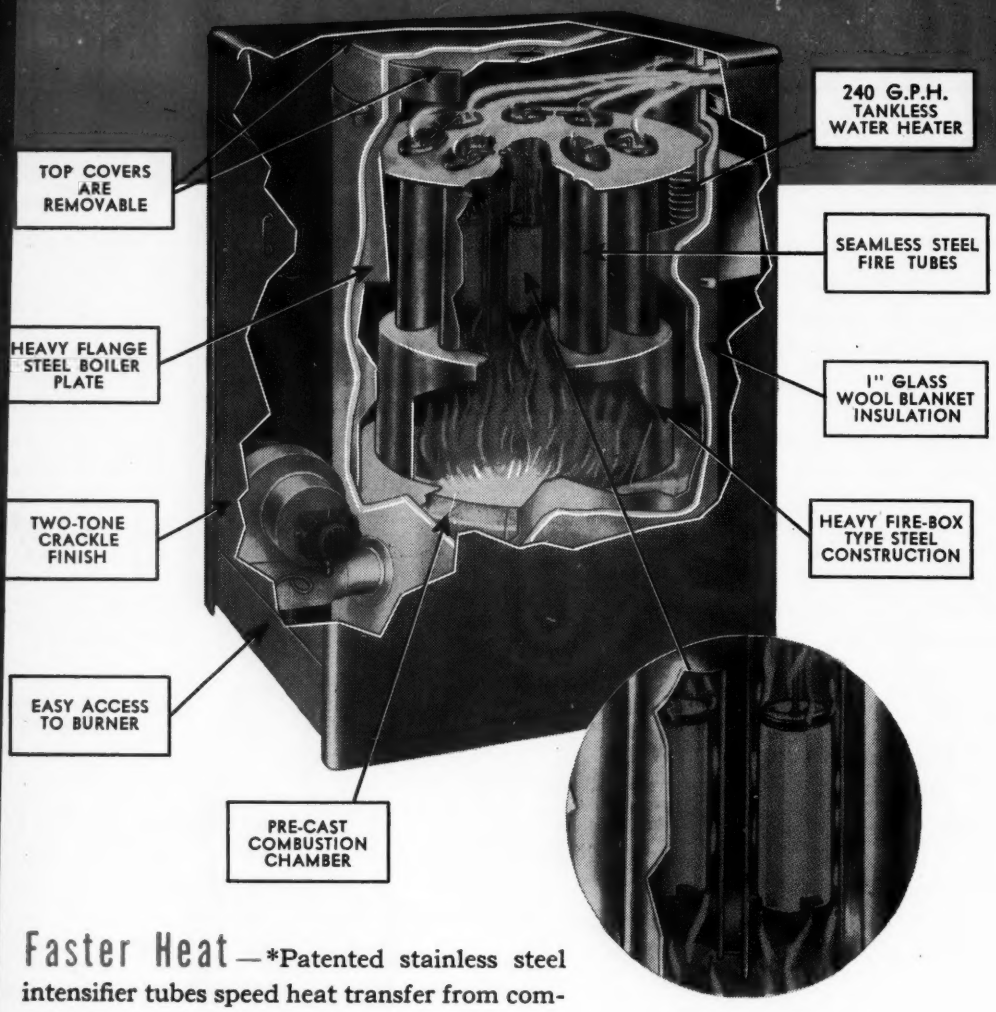
As would be expected, the lead article this time covers the exposition and convention to be held in April at Philadelphia. Bert Dunphy spent a lot of time on it.

Then because advertisers use larger space in a show issue the magazine has more pages and the editorial department can get in more feature articles than usual. There's an interesting variety among them including several of a dealer management type.

The State of Washington advertising promotion for oilheating, described by Elmslie, is the largest thing of its kind ever attempted at the retail level of the indusry.

John Schulz is unique this month. His school teacher examination for our service men will needle some of them plenty and delight the good ones. Then the Kirk Shivell story tells how to love some customers, but not all of them.

More efficient home heating


TOP COVERS ARE REMOVABLE
240 G.P.H. TANKLESS WATER HEATER
SEAMLESS STEEL FIRE TUBES
HEAVY FLANGE STEEL BOILER PLATE
1" GLASS WOOL BLANKET INSULATION
TWO-TONE CRACKLE FINISH
HEAVY FIRE-BOX TYPE STEEL CONSTRUCTION
EASY ACCESS TO BURNER
PRE-CAST COMBUSTION CHAMBER

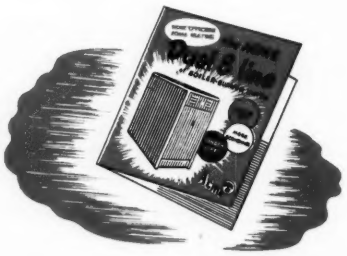
Faster Heat—*Patented stainless steel intensifier tubes speed heat transfer from combustion chamber to boiler . . . to every room in the home.

Less Fuel—These tubes, exclusive with Acme, also cut chimney heat loss, put "captured heat" to work for real fuel economy.

Longer Life—Every Acme Unit is *A.S.M.E. Constructed* of heavy welded steel, built to give better service, longer.

Easy to Install and Service . . . because the cabinet can be installed after all piping has been completed, the controls are all on the front of the boiler, the intensifier tubes are quickly accessible.

STAINLESS STEEL INTENSIFIER TUBES



Write for the new folder illustrating the complete Acme line of boiler-burner units: Acme Heating Division, 1033 New Britain Ave., West Hartford, Conn.

*U. S. Pat. No. 2,560,275

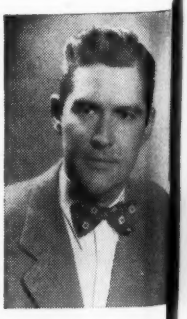
Acme DUAL 8 High Efficiency BOILER-BURNER UNITS

ACME HEATING DIVISION • THE UNITED TOOL & DIE CO.

Names in the News

C. W. "Charlie" Whitney has been named president of Oil Advisors, Inc., 30 East 40th St., New York. Active in the oilheating industry since 1926 in the Philadelphia-Baltimore area, his background has ranged from installing burners in the early years to supervising a number of fueloil and burner companies for outside financial interests. Whitney was president of the Philadelphia Oil Burner Assn. in the depression years and later president of the Philadelphia Sales Managers Assn.

W. A. Matheson, Jr., has been appointed vice-president in charge of sales, International Heater Co., Utica 2, N. Y. Matheson, who previously held the position of sales promotion manager, will have direct charge of sales for International's line of Economy furnaces and boilers. Prior to joining International, he was Chicago district sales manager and manager of the Government contract sales div., Perfex Corp. He was also manager of contract sales, Williams Oil-O-Matic Div., Eureka Williams Corp.



William C. Dee, after an illness of several months, died in his home in Utica, N. Y., March 4. Dee was for service engineer, Harvey-Whipple Inc., Springfield, Mass., and well known in the Master Kraft dealer organization and other trade groups.

From fluid heat . . . another new burner for More Profits!

Sell this newly improved version of Fluid Heat's famous WALL-FLAME ROTARY BURNER!

IT'S HERE! An even better Wall-Flame Rotary Burner from the laboratories that helped perfect it — Fluid Heat! The time-tested, ingenious design of this improved burner sets a new standard of heating efficiency for today's small homes . . . the homes you're selling, more and more!

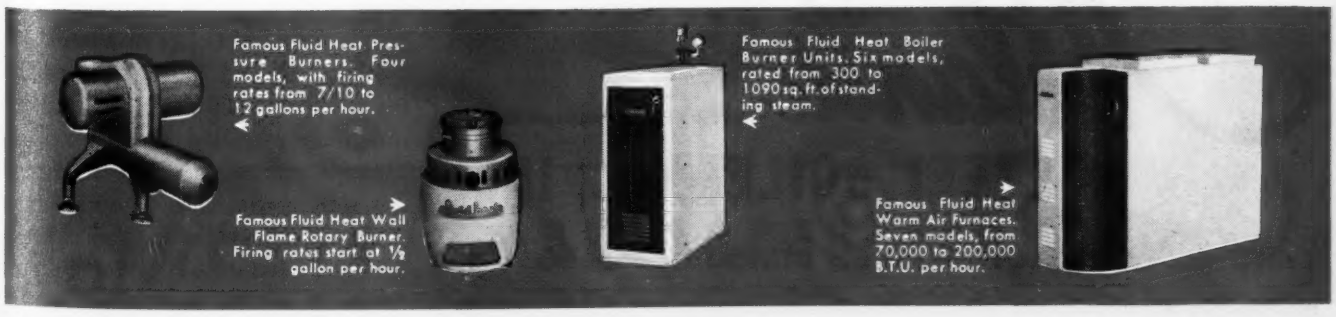
Tell your customers about the features of this new burner—about the Wall-Flame wiping principal that uses only the minimum amount of oil necessary! The one moving part, that assures longer life and freedom from attention! The heavy-duty transformer, that gives extra years of service! You'll find all these features, plus the modern appearance of the new Fluid Heat Rotary Burner, add up to real selling advantages for you!

Start pushing the new Fluid Heat Rotary Burners and Rotary-Fired Warm Air Furnaces *now!* If you're not already selling this high-profit, top-quality line, write us for details. Address: FLUID HEAT DIV., Anchor Post Products, Inc., 6700 Eastern Avenue, Baltimore 24, Maryland.

AND HERE'S THE ADVERTISING THAT'S HELPING YOU *SELL!*

These ads in *Saturday Evening Post* and *Better Homes and Gardens* tell over 7,500,000 people a month to see *YOU* for the best in oil-fired heating equipment.

fluid heat
AUTOMATIC HEATING EQUIPMENT
"WORLD'S ECONOMY CHAMPION"
Visit our Booth No. 651 at the OIL HEAT EXPOSITION—Philadelphia—April 14-18


Famous Fluid Heat Pressure Burners. Four models, with firing rates from 7/10 to 12 gallons per hour.
Famous Fluid Heat Wall Flame Rotary Burner. Firing rates start at ½ gallon per hour.
Famous Fluid Heat Boiler Burner Units. Six models, rated from 300 to 1090 sq. ft. of standing steam.
Famous Fluid Heat Warm Air Furnaces. Seven models, from 70,000 to 200,000 B.T.U. per hour.

SEE *the NEW Line of*

Atlantic

STEEL BOILERS

and

BOILER-BURNER Units

on display at

BOOTH 920

O.H.I. Show, Philadelphia
April 14-18

Be sure to see Atlantic's #500 Heating Package. The Newest Addition to the Atlantic Line of Low Pressure Heating Boilers.

Write for literature and information if you're not attending the Show

Atlantic

STEEL BOILER CO., INC.

22nd & Washington Ave., Philadelphia 46, Pa.

William B. Gathings has been named manager, Jersey City, N. J. sales district for Perfection Stove Co., Cleveland 4, O., replacing *H. C. Erhard*, who is returning to Cleveland to be special assistant to C. H. Foulds, vice-president and director of contract sales. Gathings joined Perfection in 1924 as credit manager of the Nashville, Tenn. district office. He came to the Jersey City district in 1943 as chief clerk and credit manager and, in 1948, was made office manager. Erhard previously was sales manager for Anderson Stove Co.

Harry J. Wines has been appointed sales promotion manager, Bryant Heater Div., Affiliated Gas Equipment, Cleveland, Ohio. Prior to his appointment he managed distribution sales for General Electric cooling and heating products. Previously, he held key positions with the Zenith Radio Corp. and Frigidaire Div., General Motors.

A. S. Miller, Willard C. Foust and *Robert G. Smith* have been appointed regional sales managers, Heating & Appliance Div., Evans Products Co., Plymouth, Mich. Miller, who formerly represented Motorola, Inc., will represent Evans in Michigan. Foust's territory will include Ohio, Indiana, Kentucky and part of West Virginia. Smith will serve as Evans' regional sales manager in northern Illinois, Wisconsin, Minnesota and North Dakota.

L. E. Thompson has been appointed manager of marketing, Air Conditioning Div., General Electric Co., Bloomfield, N. J. Thompson will be responsible for all functions connected with the marketing of G.E.'s year-round air conditioning and heating equipment for the home, as well as packaged air conditioning units and water coolers. Thompson joined G. E. in 1935. He was formerly manager of distribution sales and prior to that manager of parts sales and product service for the Air Conditioning Division.

LOW COST, DEPENDABLE HEATING IS NO PROBLEM WHEN YOU SELL THE

NEW WALL-O-MATIC

Monogram

OIL WALL FURNACE

The tremendous small homes market is a lucrative one for heating contractors. It can be made even more so by the proper selection and promotion or a well designed, efficient heating unit, and we're sure we have the answer in the new Wall-O-Matic MONOGRAM Oil Wall Furnace.

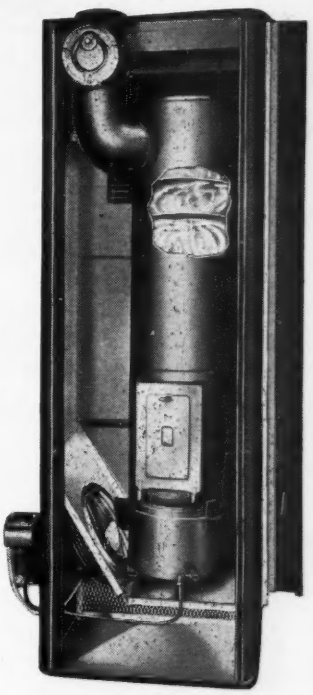
The MONOGRAM is a modern, packaged unit which allows YOU to economize on installation time, and your customer on space. No more bulky, unsightly heating plants for him . . . just a handsome, compact unit that extends only 3½" into his living room.

With the Wall-O-Matic MONOGRAM you can offer your prospects a complete furnace installation at space heater prices because there's no need for duct work and since it is listed by the UL, an inexpensive pre-fab chimney may be used.

You just can't beat a deal like this . . . besides, it's powered by the exclusive MONOGRAM burner rated at 65,000 btu which has been in use since 1937. Better write us today for more details.

If you're going to the Oil Heat Exposition in Philadelphia April 14 — 18th you can see the Wall-O-Matic Oil Furnace on display and in operation at Space #110. We'll be glad to see you and be of help with any heating problem.

The "inside" story will suit you . . .

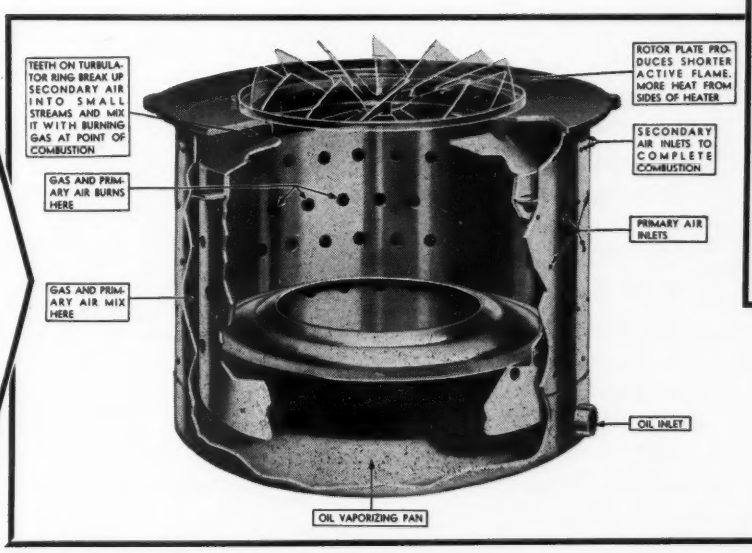


. . . and the outside will suit your customers!

THIS IS THE ANSWER.

THE POWER-AIR BURNER

THAT PRODUCES MORE HEAT AT LESS COST


TEETH ON TURBULATOR RING BREAK UP SECONDARY AIR INTO SMALL STREAMS AND MIX IT WITH BURNING GAS AT POINT OF COMBUSTION
GAS AND PRIMARY AIR BURNS HERE
GAS AND PRIMARY AIR MIX HERE
ROTOR PLATE PRODUCES SHORTER ACTIVE FLAME, MORE HEAT FROM SIDES OF HEATER
SECONDARY AIR INLETS TO COMPLETE COMBUSTION
PRIMARY AIR INLETS
OIL INLET
OIL VAPORIZING PAN

WRITE TODAY

•

QUINCY STOVE MANUFACTURING COMPANY

QUINCY, ILLINOIS

fueloil & oilheat

Editorial Leaks

FOR FIVE DAYS starting April 14 the National Oilheating Exposition and 29th Annual OHI Convention will be held in Philadelphia. You'll find the details in this issue.

It's the most impressive meeting of any kind in the industry each time it is held, not only because of the speakers and the exhibits, but also because of the thousands of dealers attending.

By all means go if you possibly can. It does a lot for a man to mill around and swap gossip with a group of people sharing the same business interests.

Then seeing the very size and activity of the meetings will send any man home with a fresh sense of the importance of his work, the importance of his industry.

Buy your railroad or plane tickets today . . . you can't lose.

❖

ATOMIC HEATING is a fact in Britain, according to a United Press report last month. A building with 80 offices for the atomic research establishment at Harwell now uses the new fuel. The wag who sent us the clipping suggested we start another magazine.

❖

WANT TO HELP with a manhunt? Who and where is Mr. R. Cory, said to be active in the oilheating industry? A wartime buddy, Mr. S. Bainbridge-Spring of England would like to get in touch with him. Spring is with R. F. Landon & Partners, Craven House, 121 Kingsway, W.C. 2, London.

❖

SPEAKING BEFORE the Chicago Association of Commerce and Industry on February 21, Dr. Robert E. Wilson, board chairman of Standard of Indiana, forecast that the growth of oil demand will slacken in the next few years. Among other reasons he based his thinking on two points that have brought some eyebrow lifting in the oilheating industry. He believes that there will be fewer oilburners installed because of the increasing use of natural gas and because there are fewer coal furnaces left to convert.

Maybe so, but we doubt it. Wilson has been underselling oilheating consistently through the years.

Too well the industry remembers the drubbing we got at the Chicago convention in the spring of 1948. The Indiana Company had said in public print, "There is a limit to the number of homeowners we can supply with heating oils; that limit has been reached." Then in his talk before the convention that spring he warned, "The industry cannot take care of a further increase of seven or eight per cent in new oilburners in 1948."

What did happen? The oil industry took care of an increase of nine per cent that year, then another 13 per cent in 1949, again 15 per cent in 1950 and 11 per cent in 1951.

Perhaps Wilson has been underselling the oil industry, rather than oilheating. Certainly it has performed much better than he had thought it could.

On the Archives Building in Washington is this inscription, "The past is prologue." In other words, what has been done can be done again.

Nearly half of all American homes with central heating plants still use hand-fired fuels. Living standards are still rising. There are still nine million present homes to be sold automatic heat plus all the new ones being built. Then another 20 million homes are heated with stoves. With reasonable sales effort many of those can be converted to automatic central heating.

In the five years just ended the number of central heating oilburners in use has risen by 2,898,000. It's a fairly safe bet that they will go up as much in the next five years, barring only the advent of full scale war?

Dr. Wilson is an economist and a scientist, very objective and sincere. When the coal industry attacked us in some Senate hearings in Washington last year, trying to force end-use controls of fuels, Wilson proved a real champion for our cause. Alone among the five oil bigwigs sent in to represent us, Wilson carried the ball and pinned the coal crowd's ears back until they gave up, for that siege at least.

He proved a real friend in need on that occasion. Maybe some day we can convince him that heating oil can be as important to Indiana's earnings as gasoline, or his beloved diesel fuel that is badly underpriced considering its merits. And if gasoline price wars keep popping up all over, maybe he'll be liking distillates before you know it.

❖

A PHOTOGRAPH in the mail shows Dr. Gustav Egloff, research director for Universal Oil Products, holding up a fancy looking blanket before the Oil Men's Club of Kansas City. As he displayed several kinds of fabrics made from petroleum products he mentioned that the suit, tie and shirt he was wearing were also born in an oil tank.

There may be some future for the clothing items but we can't see any for the blankets. Too many sleepy guys would toss around wondering "Why do I waken so oily in the morning?"

❖

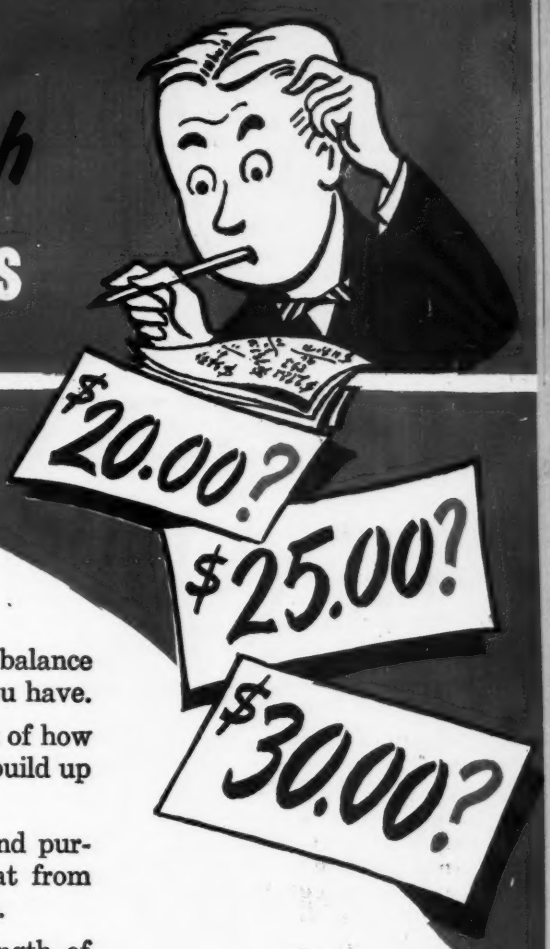
THE MARCH ISSUE story on fueloil margins has started considerable argument, as had been hoped An interesting sidelight not mentioned in the story is that the nine per cent of companies who regularly sell at prices above posted had average margins last year of 3.18¢ against the industry average of 2.93¢.

But their net profit per gallon before income taxes was 1.37¢ against an industry average of .60¢. With a selling price .26¢ higher, profits were .77¢ more. The kind of courage that will sell above the market seems to go with better management on other points too.

❖

THE OIL HEAT ASSN. of Maryland boasts that 68% of the country's broilers are raised on the Del-Mar-Va peninsula, a territory within the association's sphere of influence. It further proclaims that 27% of all chicks are brooded with oilheat, although electricity has us edged with their 29%.

How Many Dollars *is a Fuel Oil Account Worth* on Your Books



Your fuel oil accounts may not show on your balance sheet — but they are the most valuable asset you have.

You can readily replace equipment. But think of how much time, effort, and expense it would take to build up your customer list again.

Fuel oil businesses are currently being sold and purchased with consumer oil accounts evaluated at from $25.00 to $30.00 each — and in some cases, more.

Every customer that you secure on the strength of clean and annoyance-free delivery through installation of VENTALARM Signal puts, in effect, $25.00 on the asset side of your balance sheet.

A SALES PLAN FOR FUEL OIL ACCOUNTS
FUEL OIL DELIVERY METHODS HAVE CHANGED!
TODAY –
TIME is the essence of PROFIT
The following 11 pages tell
A POWERFUL STORY OF PROFIT FOR YOU

For full particulars on how VENTALARM Signal can help your financial statement, see "*TODAY — Time is the essence of Profit*", the eleven-page Model "LC" presentation in the Feb. issue of FUEL OIL & OIL HEAT . . . or write us for a reprint.

For the VENTALARM Signal sales approach to new accounts, write now for our booklet entitled, "*A Sales Plan for Fuel Oil Accounts.*"

See us at the
O. H. I. SHOW
Booth 1052

SCULLY SIGNAL COMPANY

76 First St., Cambridge 41, Mass.

Canadian Licensee
EMPIRE BRASS MFG. CO., LTD., London, Ontario

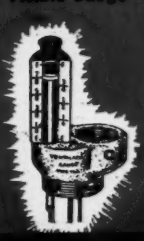
Contact your REGULAR SUPPLY HOUSE for VENTALARM Signal in a variety of sizes . . . and other Scully Fuel Oil Delivery Aids.

All Scully Products are manufactured under U. S. & Foreign patents or patents pending.

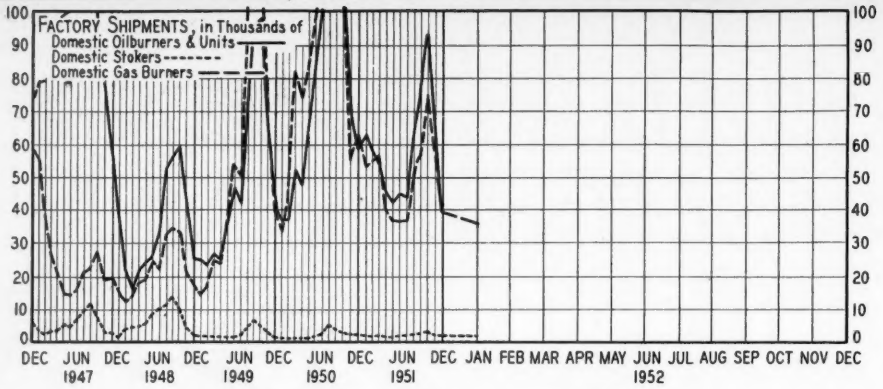
VENTALARM® SIGNAL
Whistling Tank Fill Signal

SCULLY® TANK GAUGE
Easy-to-See Gauge Simple, Sturdy, Economical

VENTALARM® TANK GAUGE
Combination Audible Signal and Visible Gauge



FASFILL® CONNECTOR
Portable connection for gun and fill pipes of all sizes.

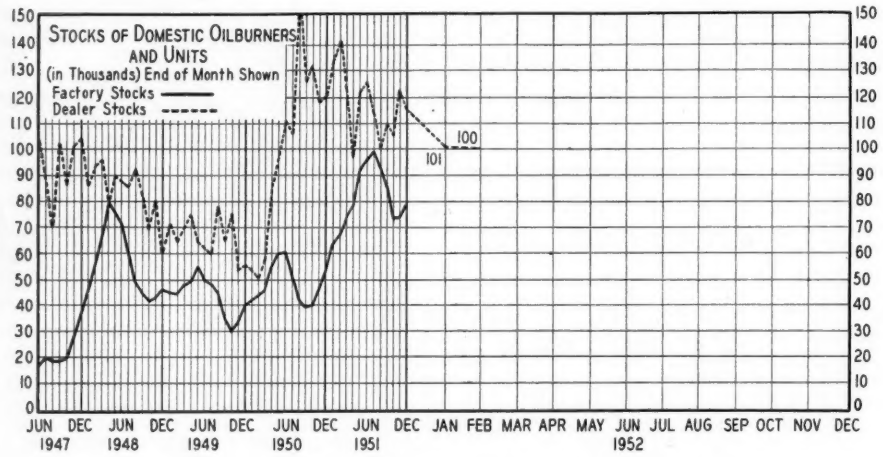

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 147 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	DECEMBER			TWELVE MONTHS		
	1951	*1950*	*Percent Change*	*1951*	*1950*	*Percent Change*
Conversion	26,396	39,569	— 33.3	488,661	664,053	— 26.4
Boiler Units	2,758	6,074	— 54.6	58,052	90,140	— 35.6
Furnace Units	10,369	13,322	— 22.1	146,621	171,074	— 14.3
All Domestic	39,523	58,965	— 32.9	693,334	925,267	— 25.0
Commercial	2,401	4,381	— 45.2	39,540	36,554	+ 8.1
Total	41,924	63,346	— 33.8	732,874	961,821	— 23.8


STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
100
101
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

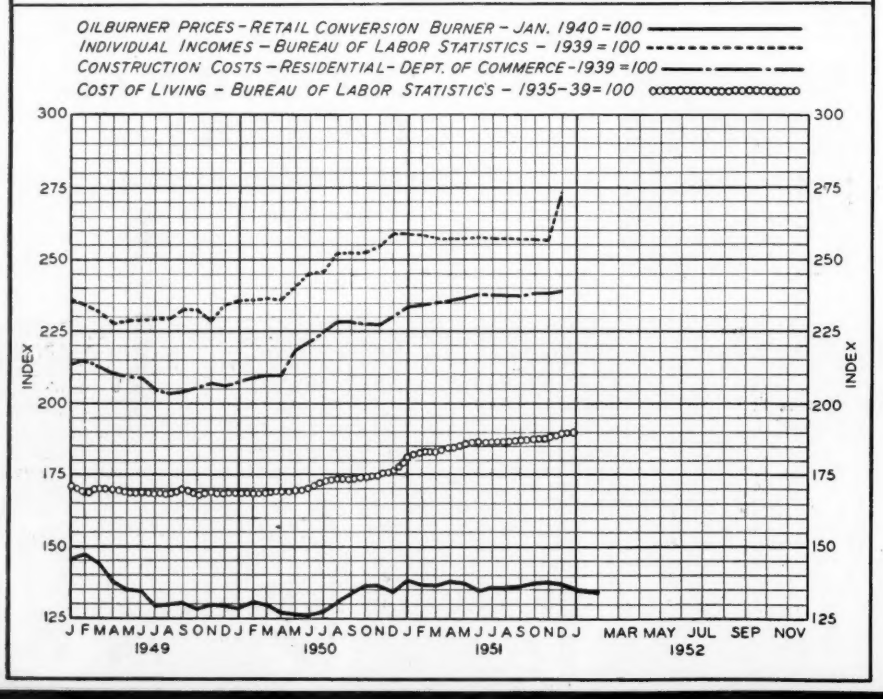
February Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
February Aver.	$329	$689	$634
January Aver.	328	688	643

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
February	139.1	Six months ago	135.7	February	134.2	Six months ago	136.3
January	138.8	Year ago	141.5	January	135.4	Year ago	136.8

OILBURNER PRICES COMPARED TO GENERAL INDEXES


OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
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1949 1950 1951 1952

Oilheating Trends

FEBRUARY INSTALLATIONS of domestic oilburners and units are estimated at 37,577, a rise of 11% over last year. These installations were divided: new homes 12,770; replacements of old oilburners 7,411; conversions from other fuels 17,396. The total installations for the first two months of the year were approximately 85,722, compared with 73,973 in the same period of 1951. This shows a gain of 16%.

BURNER STOCKS: Stocks of domestic oilburners and units in dealer hands on March 1 were approximately 100,350 which is virtually the same as the figure of the previous month. The March 1 total was made up: conversion burners 63,628; boiler-burner units 18,038; furnace-burner units 18,684. Factory stocks on December 31, the latest available data, were 78,937, compared with 53,416 on the same date the previous year.

TANK STOCKS: Customer oil storage tanks in dealer hands showed little change during the month of February, closing with 122,219. By sizes the March 1 stocks were: 220-275 gallon 111,930; sizes 550-675 gallon 6,630; sizes 1000 gallons or larger 3,659. Tank prices continue to drop slowly. The weighted average on March 1 for 275 gallon tanks was $40, compared with $43 on the same date last year. By sections of the country the current average is: New England $35; Mid-Atlantic $42; Midwest $36; Pacific Northwest $46.

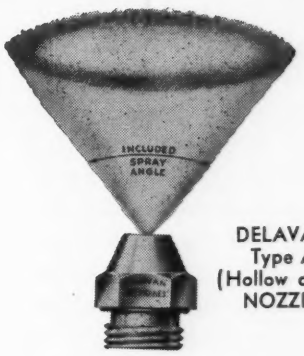
UNBURIED OIL TANKS: Having recently encountered builder developments in the Chicago area using 275 gallon outdoor tanks above ground, a check was made this month to learn the prevalence of this practice. These tanks, unburied, are used for No. 2 oil. In the New England states one-fourth of the reporting dealers say that there are some tanks of this type in their communities although they represent only a minor fraction of 1% of total installations. In the Mid-Atlantic area a third of the reporting dealers say that there are such tanks in their markets, representing probably 1% of total installations. In the Midwest the

Nozzle TIPS

Install THE NOZZLE PREFERRED by 99 Leading Manufacturers!

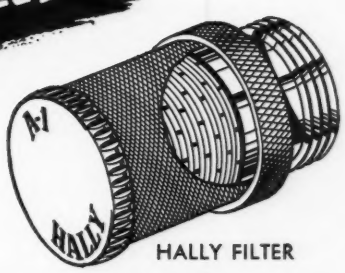
- Delavan Nozzles are used by 99 leading oil burner and furnace manufacturers as original equipment. They base their choice on results obtained on the job and in their own field and laboratory tests.

  In less than two years, more than 20 manufacturers of small burners or furnaces—and servicemen everywhere—have learned that HALLY FILTERS, attached to DELAVAN NOZZLES as original equipment, provide clog-proof service on burner installations. The reason? The positive filtering action of the HALLY FILTER prevents foreign particles from ever reaching nozzle slots.



DELAVAN Type A (Hollow cone) NOZZLE

"IT PAYS TO USE DELAVAN NOZZLES"



HALLY FILTER

- Each DELAVAN nozzle spray tested under accurately controlled oil pressure, viscosity and temperature conditions. Every DELAVAN NOZZLE guaranteed to be accurate in rate of flow, spray quality and spray angle.

Openings in HALLY FILTER only one-fourth to one-third as large as those in ordinary wire screen strainers. Install DELAVAN NOZZLES with Hally Filter attached.

See US AT BOOTH NO. 3 AT THE OHI SHOW — APRIL 14-18.

DELAVAN MANUFACTURING CO.

WRITE FOR CONDENSED CATALOG 347C

3009 SIXTH AVE• DES MOINES 13, IOWA

practice is more wide-spread, with two-thirds of the dealers saying that it is done in their markets. They indicate that 3% or 4% of Midwest installations have these unprotected tanks, mostly in builder developments or on farms.

On the West Coast two-thirds of the reporting dealers mention the practice, with perhaps 15% of tanks being unburied. Among the reporting dealers themselves, 30% made some installations last year with tanks above ground for No. 2 oil and in the Midwest half of them did it.

This study was made because some Midwest oil companies were complaining that the weather gets too cold at times for No. 2 oil to flow from exposed tanks. Probably 10,000 such installations were made in the country in 1951. Aside from the Pacific Northwest and other mild climate areas, this would seem a rather questionable practice with oil as heavy as No. 2.

GAS COMPETITION: In spite of the restrictions that have been placed on the gas industry in recent months and in spite of the fact that gas equipment sales are sharply down, oilheating dealers are looking for tougher competition this year. New England dealers as a whole expect gas installations in 1952 to be 16% higher than last year. Half of the reporting dealers from that section say that public enthusiasm for gas has dropped somewhat.

The dealers reporting from the Mid-Atlantic states expect gas installations in 1952 to rise 3%, and 36% of the dealers think the public is cooling off on gas. The composite opinion of the Midwest reporting group is that gas installations will be 10% higher this year, and only one-seventh of the dealers from that section say that the public is getting less enthusiastic about gas.

Only a few cities in the Pacific Northwest have gas but two-thirds of the reporting dealers in that section believe that gas has lost ground in public acceptance.

A great many of the local gas utilities are asking for rate increases. The dealers report this to be true in 65% of the New England cities, in 61% of the Mid-Atlantic cities, in 74% of the Midwest cities, and in all of the Pacific Northwest cities that were reported.

FUELOIL SUPPLY: Up until recent weeks there was considerable publicity in Eastern newspapers over impending fueloil scarcity that was to show up by now. However, only 5% of the reporting dealers from any section of the country say that they had any serious difficulty in getting all of the oil they wanted and getting it on time. No one of the reporting group had a single instance of a customer running out be-

(Please turn to page 222)

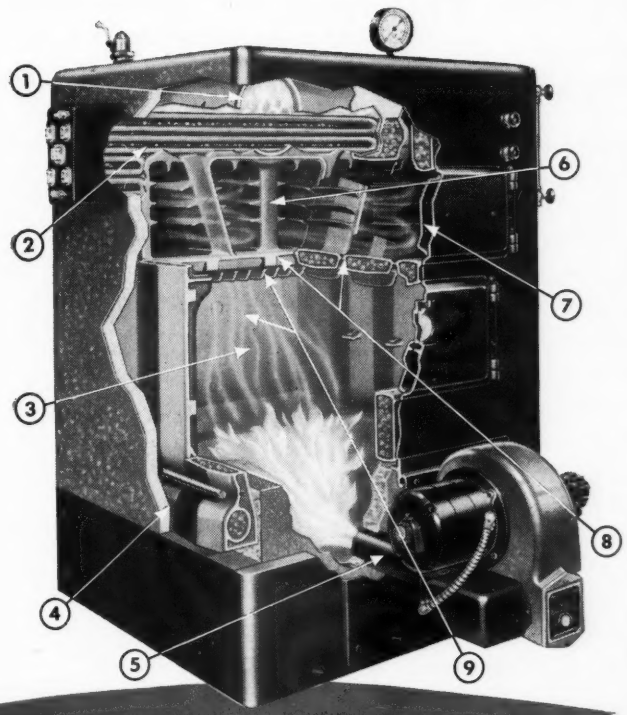
Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
February		2 MONTHS			February		2 MONTHS	
1952	1951	1952	1951		1952	1951	1952	1951
15	44	37	98	Albany, N. Y.	..	..	..	..
163	257	319	563	Baltimore, Md.	486	408	785	851
..	..	..	..	Binghamton, N. Y.	4	2	6	5
..	..	..	..	Bloomfield, N. J.	2	2	8	5
..	480	..	1134	Boston, Mass.	22	17	58	29
27	102	137	183	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	52	49	100	81
..	1	..	2	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	45	66	..	137
636	208	1409	550	Detroit, Mich.	324	594	564	1177
21	23	39	71	Elizabeth, N. J.	2	13	2	18
36	27	83	72	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	20	46	33	83
..	..	..	..	Hackensack, N. J.	..	3	..	5
80	264	206	485	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
13	11	22	25	Irvington, N. J.	1	1	2	3
..	..	..	..	Lynn, Mass.	16	8	24	18
43	28	103	102	Meriden, Conn.	..	..	..	..
..	57	..	150	Milwaukee, Wisc.	..	130	..	268
115	44	282	130	Minneapolis, Minn.	71	48	95	143
13	13	35	35	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	7	0	10	0
19	20	38	41	Mt. Vernon, N. Y.	..	..	..	..
79	81	155	176	Newark, N. J.	..	..	..	..
122	82	243	101	New Bedford, Mass.	..	..	..	..
48	37	177	95	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
20	25	44	69	New Rochelle, N. Y.	5	10	37	31
..	1508	..	4106	New York City (total)	..	..	..	..
..	1180	..	3085	Brooklyn-Queens	..	..	..	..
513	328	..	1021	Manhattan, Bronx, Rchd	..	..	..	..
..	172	..	235	Norfolk, Va.	179	101	314	172
..	..	..	..	Oakland, Calif.	..	..	..	..
38	30	120	108	Omaha, Neb.	55	38	96	85
9	8	18	23	Orange, N. J.	0	0	1	18
16	8	30	21	Passaic, N. J.	..	..	..	..
29	27	50	49	Paterson, N. J.	11	15	17	24
583	676	1172	1591	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	12	18	28	44
16	25	65	114	Portland, Me.	2	1	5	4
257	253	642	503	Portland, Oreg.	121	152	190	288
15	13	27	25	Poughkeepsie, N. Y.	..	..	..	..
113	63	229	153	Providence, R. I.	8	18	17	37
..	..	..	..	Reading, Pa.	3	14	11	17
48	118	112	215	Richmond, Va.	37	53	79	92
23	48	81	76	Roanoke, Va.	..	..	..	..
110	112	330	253	Rochester, N. Y.	..	..	..	..
15	7	32	45	Rockville Center, N. Y.	12	9	17	20
31	25	66	54	Salem, Mass.	1	4	5	7
137	36	268	70	St. Louis, Mo.	31	48	52	85
30	50	86	159	St. Paul, Minn.	139	49	177	90
31	60	75	131	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	171	180	308	330
..	..	..	..	Springfield, Mass.	65	26	114	55
58	72	121	134	Stamford, Conn.	..	..	..	..
..	5	..	11	Syracuse, N. Y.	23	14	41	28
..	..	..	..	Trenton, N. J.	13	4	16	6
..	..	..	..	Utica, N. Y.	5	6	10	11
90	76	204	184	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	18	10	34	50
12	25	38	44	White Plains, N. Y.	17	4	26	13
..	62	..	142	Wilmington, Del.	12	22	18	30
110	120	257	246	Worcester, Mass.	..	..	..	..
34	28	97	76	Yonkers, N. Y.	..	..	..	..
3768	3474	7449	7070	*Totals*	1985	2050	3290	3950
+8.5		+5.4		*Percent Change*	—3.2		—16.7	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

AMERICAN-Standard
HEATING

Engineered to solve the heating problems of larger homes



Features That Assure Dependable Fuel-Saving Operation

Exbrook Boiler

FOR OIL OR STOKER FIRING

● Designed exclusively for automatic firing with coal or oil, the Exbrook is ideally suited for larger homes, small to medium apartment houses and other buildings. Made of durable cast iron to give long-lasting service, this efficient boiler is noted for its dependable, fuel-saving operation. A careful check of the features listed below will show why the Exbrook "fills the bill" for so many of today's modernization jobs. For full details about the Exbrook and other larger-than-average-capacity boilers in the American-Standard line, contact your wholesale distributor.

1. EXTRA LARGE NIPPLES—extend below water line and assure free and rapid circulation of boiler water and quick heat response. Also permit use of a built-in or external water heater.

2. BUILT-IN WATER HEATER—Tank or tankless type is available on oil boilers at small extra cost for providing year 'round hot water.

3. COMBUSTION SPACE—adequate in size, correctly proportioned and air-tight for burning fuel efficiently and economically.

4. INSULATION—suitable insulating material underneath attractive metal jacket helps prevent heat loss and keeps jacket cool.

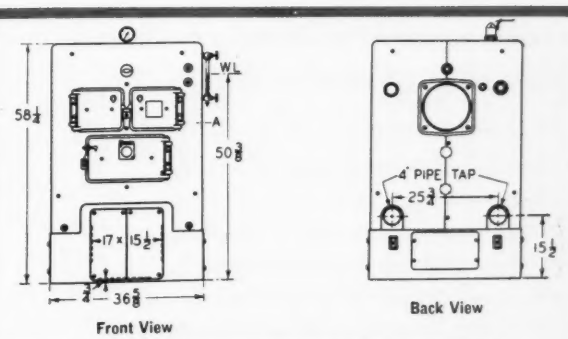
5. OIL BURNER—a perfectly matched, flange mounted Arcoflame Oil Burner with its famous fuel-saving "sunflower" flame, is shown. Base plate also permits easy installation of stoker.

6. MULTI-FINNED FLUES—provide long flue travel with maximum surface for extracting available heat from hot gases, for peak efficiency and economy.

7. STURDY, HEAT-PROTECTED DOORS—clean-out and fire doors of heavy construction have cast iron baffle linings to protect them against warping.

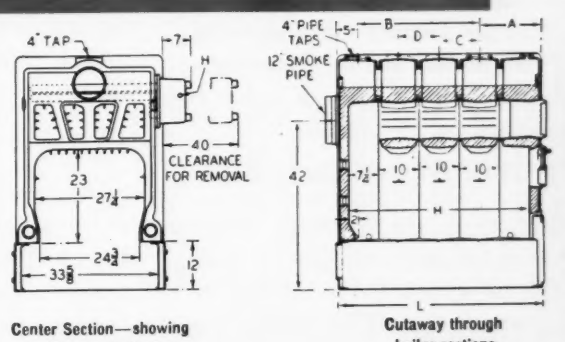
8. TIGHT JOINTS—where sections and doors contact other surfaces they are machine ground to form tight joints and close fit. This prevents short circuiting of gases, uncontrolled infiltration of air and escape of odors.

9. DIRECT HEATING SURFACE—ample finned heat-absorbing surface exposed directly to fire, for extra efficiency.



Front View — Back View

OUTLETS • INLETS • DIMENSIONS



Center Section—showing tankless water heater

Cutaway through boiler sections

American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

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Government Influences on Fuels

by
Milburn Petty

WASHINGTON—An advisory committee of fueloil distributors will be set up soon by the Office of Price Stabilization to consider margins.

While the first assignment of this new group will be to advise on the proposed overhauling of the East Coast price structure, the group may also be called upon to consider other problems of the fueloil marketer.

Since the OPS aims to put into effect by June 1st any adjustments in the Gulf-East Coast price structure, the committee will be named soon.

No Action on Tanker Rates Seen

During its recent conferences with the advisory committees of primary suppliers and tanker operators, OPS gave no sign that it intends to do anything about tanker rates.

Instead, the OPS petroleum branch will likely recommend increases of about 1¢ per gallon on heating oils and kerosene at East Coast points.

This would reflect an 8¢ price at the Gulf as well as offset higher rates on tanker movements to the East.

May Consider New Price Ideas

The OPS committees may be asked to consider some new pricing ideas for the East Coast.

For example, there have been protests that price increases—to reflect raises in refinery ceilings—should be graduated at the various levels instead of passing through to the consumer the same amount of refinery advance.

A larger discount for cargo buyers —to encourage increased purchasing on a delivered basis—may also be considered.

PAD Favors Residual Increase

Meanwhile, the Petroleum Administration for Defense believes that ceilings must be increased on residual fueloil prices, if the supply situation is to be improved.

With crude at $3 at Gulf Coast refineries, there is no incentive—at present prices of residual—to increase yields, says PAD.

Higher prices would make it possible to move the mid-western surplus to the Gulf, thence to the East Coast. More of the heavy crudes would be processed.

At present, with tanker rates high, the movement of residual to the East Coast is held to a minimum—only enough to meet commitments.

Oil Expansion Slated to Get OK

Indications are that the $10 billion oil expansion program will be approved and additional steel allocated to start it on July 1st.

In fact, the refinery goal submitted by PAD—to expand capacity at the rate of 475,000 B/D per year—was increased to 500,000 B/D annually.

One factor in the prompt acceptance of the oil expansion program was the fact that the supply situation on steel has eased greatly. More plate is being allotted for the oil industry, meaning more for transportation and storage.

But this may also prompt the gas industry to attempt to get its market expansion program back on the track. PAD has been holding down the lid. Steel allocations for gas lines have steadily decreased, quarter by quarter, while more and more pipe has been allotted for oil pipelines.

NPC Storage Study Requested

PAD has requested that the National Petroleum Council bring up to date its study of tankage capacity, originally made in 1948 and again in 1950.

This time, however, PAD wants a breakdown into smaller geographic areas; for example, the subdivision of the East Coast district into New England, Middle Atlantic and South Atlantic.

IPAA Seeks Higher Crude Price

Independent Petroleum Association of America is not making much progress with its proposal to decontrol crude oil prices.

There was no mention of refined product prices because, as Russell Brown, the producer group's chief counsel, said, "we felt that the refiner could argue his own case better."

The IPAA did not deny that this might result in a crude price increase but did say that there would not be an "unreasonable" advance, pointing out that crude prices generally have not been increased since 1947.

However, the IPAA did attach a chart to its petition to OPS indicating the belief that a 42¢ increase in crude was needed this year, 30¢ next year, if the PAD's drilling program is to be achieved.

Meanwhile, several oil marketer groups have opposed decontrol of crude prices unless the same treatment is given also to product prices.

Navy to Get Its Fuel Oil

The tension on Navy Special Fuel Oil has eased—temporarily, anyway.

In response to Secretary Chapman's appeal, suppliers have offered enough to take care of the Navy's needs to April 30 at present ceiling prices ($2.10 at the Gulf; $2.70 at New York, etc.).

Doty to Shift Over to FPC

Dale E. Doty, Assistant Secretary of the Interior, has been nominated to the Federal Power Commission. At Interior, he has been one of Secretary Chapman's closest associates for years.

During his hearings on his nomination, Doty said he had "no opinion" on the FPC's decision in the Phillips Petroleum Case in which the commission disclaimed control over field prices of natural gas.

Even if Doty should ultimately side with Commissioner Buchanan, the FPC would still stand 3 to 2 against assuming control of field prices, according to the line-up in the Phillips Case, now before the courts.

U. S. Tanker Construction Soars

A total of 52 tankers are now under construction at U. S. shipyards. Of these, exactly half are destined to fly the American flag, making them eligible for coastwise and intercoastal service.

More may be started under the impetus of the defense tanker construction program, allowing accelerated tax amortization for 60% of the total cost, and the increased availability of steel.

Several of these tankers run 45,000 tons or more—as big as a battleship.

Largest burner Show ready to open

Sales, Service and Supply to be keynote of Show Week's convention Sessions

by

Bert Dunphy

THE OILHEATING INDUSTRY'S biggest show, the 29th Anniversary Oil-Heat Exposition and annual Convention, being sponsored by the Oil-Heat Institute of America, Inc., in Philadelphia from April 14 to 18, is all set with a program formulated to highlight the emphasis on "Shirtsleeve Selling." Equipment exhibits will be housed in the Exposition Hall of Commercial Museum, 34th St. below Spruce, and convention sessions will take place in the Benjamin Franklin Hotel, Chestnut at Ninth.

Three big days have been arranged for all levels of the oilheating industry, burner and fueloil dealers, distributors, wholesalers and manufacturers, covering technical, management and selling topics. In addition to these sessions, the equipment displays will unveil new products for 1952, with many items making their premiere appearance.

L. A. Casler is chairman of the Show Committee, other members of which are: J. W. Owens, H. H. Wilkinson, J. H. B. Albert, R. S. Bohn, C. L. Hastings, P. K. Addams, T. A. Crawford, L. N. Hunter, C. T. Burg, Robert Gray, A. T. Atwill and R. H. L. Becker, G. T. Kaufman and F. S. Burroughs from OHI Headquarters.

In releasing the program for the Convention, Mr. Casler said, "Two of the programs for general sessions, Industry Day and Dealer Day, will be of the panel-type forum. Four speakers will address the groups on industry topics, fields in which they are recognized as authorities. A 'moderator' will introduce each speaker, and after the speeches, will preside over a panel composed of the speakers themselves who will answer and discuss questions from the floor. This procedure, it is felt, will afford any dealer a chance to benefit from the opinions of the best brains in the industry, applied specifically to the problem posed by that dealer."

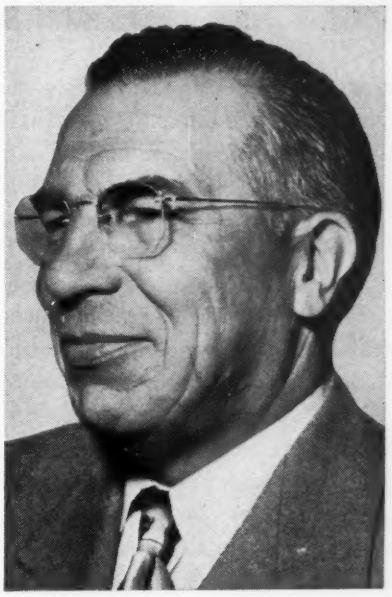
One hundred and forty exhibitors have contracted for 32,000 sq. ft. of display space, laid out over 114,000 sq. ft. of floor area to permit wide, uncramped aisles and easy traffic flow. Thus, the 29th Anniversary Oil-Heat Exposition will be the largest ever held and, with an estimated 7,000 equipment and fuel dealers and 25,000 or more architects, builders, contractors, engineers, home owners and builders expected to attend, it bids fair to surpass all others in attendance also.

Trade and Public invited

Admission to trade and public is free. Exhibitors and their staffs may register in advance, at a special desk to be maintained for them. Dealers will be asked to register at the trade desk before entering the exhibit area and the public will be admitted without registering. To identify exhibitor staffs they will be issued badges with red inserts. The dealers will receive badges with green printing and OHI people, blue. This year, each of the public will be given a lapel button to make it easier to distinguish between the trade and public.

The Exposition opens at 1:00 P.M. on Monday, April 14 and at the same hour each day. It will remain open until 10:00 P.M. on Monday, Tuesday and Wednesday, will shut down at 6:00 P.M. on Thursday to permit attendance at the OHI annual banquet and will close finally on Friday evening, April 18 at 6:00 P.M., making a total of 37 hours.

Included in the exhibits will be a variety of equipment produced by

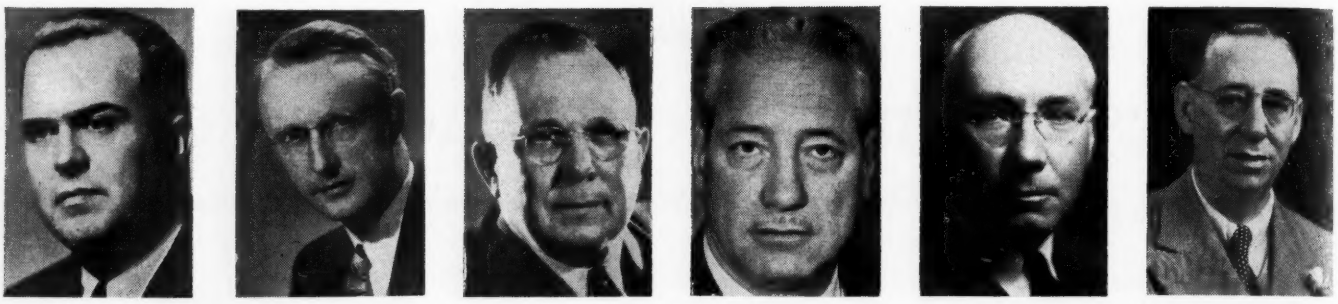


T. A. Crawford
President, OHI

manufacturers of oilburners, boilers, furnaces, water heaters, space heaters and air conditioning units for domestic use and complete lines of commercial-industrial oilburners. Supplementing both the domestic and commercial-industrial lines will be exhibits by manufacturers of accessory equipment, such as controls, pumps, transformers, motors, nozzles, combustion chambers and refractory materials, draft regulators, insulation, valves, pipe and fittings, circulators, radiators, fans and tools. Also, several oil companies and manufacturers of meters and pumps used in fueloil delivery have taken space. And, two local banking institutions are exhibiting.

For the first time the Exposition is to have an exhibit by a manufacturer of fueloil delivery truck tanks. The Allied Tank Truck Equipment Co., Philadelphia, Pa., is going to show its "Rebel" style tank truck, equipped with modern delivery accessories. The "Rebel" tank will be displayed mounted on an unusually short wheelbase

Engineering Session **Banquet** **Industry Day Session**



From left to right: *L. N. Hunter, chairman of the Engineering Committee and Engineering Session speaker Eugene O. Olson; A. T. Atwill, past-president of OHI and toastmaster at the annual banquet; L. A. Casler, chairman of the Show Committee and moderator at Thursday's Industry Day Session and R. M. Bartlett and J. E. Rowland, speakers at that session. E. C. Webb, J. Verne Resek and E. B. Delgass also will talk at the Engineering Session; Henry H. Fowler and T. A. Crawford are scheduled to appear during the Industry Day Session program.*

truck, designed for maximum maneuverability and the exhibit will feature late model Granco meters and pumps.

A "live exhibit" area has been provided in one section of the Exposition Hall, where equipment can be featured under fire. Thirty-four companies have reserved space in the section.

Dominating the entire exhibition floor will be a huge Theme Center, incorporating a 24 ft. tower. The Theme Center covers nearly 500 sq. ft. of floor space and will house in four sections booths of the Oil-Heat Institute, its Distribution Division, the Philadelphia Chapter of OHI and an exhibit of the Oil Industry Information Committee, marking the first cooperative venture of this kind between the Institute and the OIIC.

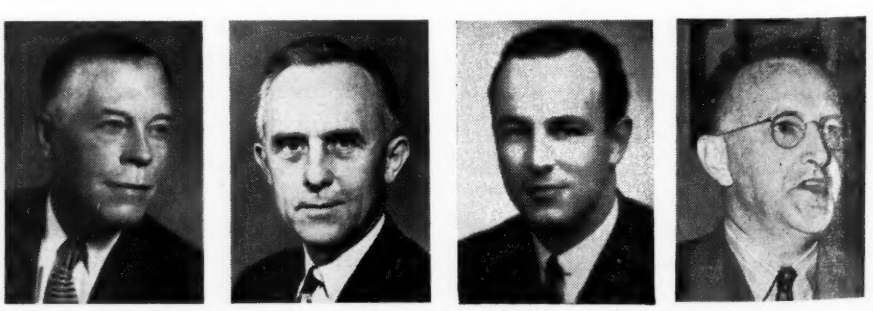
Convention sessions, all of which are to be held at the Benjamin Franklin Hotel, are to get underway on Monday morning, April 14, with a meeting of the Executive Committee, followed at 10:00 A.M. by a final meeting of the retiring Institute board of directors. This will be an open meeting, but the luncheon session of the new board on Tuesday will be restricted to board members only. In the afternoon the annual meeting of the Accessory Division will take place, with C. L. Hastings, chairman, conducting the session, which begins at 2:30 P.M. The retiring board of the Distribution Division meets at the same time.

The annual meetings of the Institute and the Distribution Division are scheduled for Tuesday morning, April 15, with T. A. Crawford, president of the Institute, and J. H. B. Albert, chairman of the Distribution Division, presiding. These are to be business meetings, open to all members and guests. Election of new directors will be held, voting for which will be confined to members only.

A meeting of the Technical Division, which was placed on an active basis on February 15, is to be held on Tuesday, April 15 at 10:00 A.M. W. S. Quimby is chairman of the Division, which has been established as a liaison agency between the oil and burner industries on common technical problems. The Institute sponsors the activity for all industry men, whether members of OHI or not.

The first of three general sessions is to be held at 2:00 P.M. on April 16, which has been designated "Engineering Day." The Engineering Session, conducted by L. N. Hunter, chairman of the Engineering Committee, will present five papers of interest to manufacturers, dealers and others who want to keep up with latest developments. J. Verne Resek, Cleaver-Brooks Co., will talk on "Fueloil Specifications" and E. C. Webb, Iron Fireman Mfg. Co., will discuss "Storing and handling fueloil." A paper on "Improving start-stop characteristics of high pressure oilburners" will be delivered by Eugene B. Delgass, Socony-Vacuum Oil Co., while Eugene

Oil-Heat Institute Officials

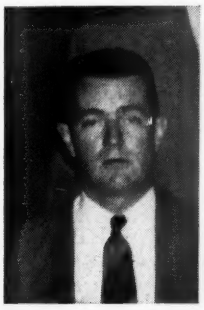


From left to right: *Ralph Becker, managing director; G. T. Kaufman, technical secretary; F. S. Burroughs, national secretary, Distribution Division and Fred Beckwith, executive secretary, Oil Heat Institute of New England. Messrs. Burroughs and Beckwith are participating in the Distribution Division Chapter Secretary's Work Shop on April 16, along with Harold Mottram, Wisconsin Oil Heat Association, and John Morrison, Electrical Association of Philadelphia.*

O. Olson, Delavan Mfg. Co., is slated to tell of "The performance of pressure atomizing nozzles in domestic oilburners." Mr. Hunter, as part of the program, will give details of "OHI engineering activities."

On Industry Day, Wednesday, April 16, the second general session gets under way at 9:00 A.M., with L. A. Casler, Eureka-Williams Corp., acting as moderator in the presentation of top authorities on subjects of interest to all levels of the industry. Henry H. Fowler, Administrator, National Production Authority, will furnish up-to-date information on Government programs in a talk entitled, "What is ahead for controls" and R. M. Bartlett, Gulf Oil Corp., will discuss "The oil situation." In companion papers, J. E. Rowland, J. E. Rowland Co., is to outline "The dealer viewpoint" and T. A. Crawford, Timken-Silent Automatic Division and president of the Institute, will sum-

(*Please turn to page 210*)



Top: *(Left) Clark L. Hastings, chairman of the Accessory Division; (right) Senator Homer E. Capehart, speaker at the Accessory Division luncheon on April 16 at 1:00 P. M.*

Bottom: *(Left) W. S. Quimby, chairman of the Technical Division, who will conduct its meeting on April 15 at 10:00 A.M.; (right) C. T. Burg, chairman of the Commercial-Industrial Division, who will conduct its meeting on April 16 at 2:00 P.M., following a noon luncheon.*

Program

Exposition: Commercial Museum
Meeting: Benjamin Franklin Hotel
April 14 to 18, 1952, Philadelphia

MONDAY, APRIL 14

9:00 A.M.—Executive Committee meeting
10:00 A.M.—Retiring OHI Board Meeting (*Open session*)
12:00 A.M.-4:00 P. M.—Ladies Registration
1:00 P. M.—29th National Oil Heat Exposition opens
2:30 P. M.—Annual Meeting, Accessory Div., *C. L. Hastings, Chairman*
2:30 P. M.—Retiring Board meeting, Distribution Div.
10:00 P. M.—Exposition closes

TUESDAY, APRIL 15, "ENGINEERING DAY"

8:45 A.M.—Annual Meeting, Distribution Div., *J. H. B. Albert, Chairman*
10:00 A.M.—Annual Meeting, OHI of America, *T. A. Crawford, Chairman*
10:00 A.M.—Technical Division Session, *W. S. Quimby, Chairman*
12:00 A.M.-4:00 P. M.—Ladies Registration
12:30 P. M.—New OHI Board of Directors, Luncheon Meeting
1:00 P. M.—Exposition opens at Commercial Museum
2:00 P. M.—Engineering Session, *L. N. Hunter, Chairman*
Speakers: J. Verne Resek, Cleaver-Brooks Co.
"Fueloil Specifications"
E. C. Webb, Iron Fireman Mfg. Co.
"Storing and handling fueloil"
Eugene O. Olson, Delavan Mfg. Co.
"Performance of pressure atomizing nozzles"
Eugene B. Delgass, Socony-Vacuum Oil Co.
"Improving start-stop characteristics of high pressure oilburners"
4:00 P. M.—New Distribution Div. Board of Directors meeting
6:00 P. M.—Annual dinner and entertainment, Old Timers' Club
10:00 P. M.—Exposition closes

WEDNESDAY, APRIL 16, "INDUSTRY DAY"

9:00 A.M.—Industry Session, *L. A. Casler, Moderator*
Speakers: Henry H. Fowler, National Production Authority
"What is ahead for controls"
R. M. Bartlett, Gulf Oil Corp.
"The oil situation"
J. E. Rowland, J. E. Rowland Co.
"The dealer viewpoint"
T. A. Crawford, Timken Silent Automatic Div.
"The manufacturer viewpoint"
12:00 A.M.-4:00 P. M.—Ladies Registration
12:30 P. M.—Commercial-Industrial Committee Luncheon
1:00 P. M.—Accessory Division Luncheon, *C. L. Hastings, Chairman*
Speaker: Senator Homer E. Capehart (R., Ind.)
1:00 P. M.—Exposition opens at Commercial Museum
2:00 P. M.—Commercial-Industrial Committee Meeting, *C. T. Burg, Chairman*
3:00 P. M.—Distribution Div. Chapter Secretaries' Work Shop
(For Chapter Secretaries only)
Speakers: Fred Beckwith, Oil-Heat Institute of New England
"Problems in organizing and conducting schools for technical training"
Harold Mottram, Wisconsin Oil Heat Association
"Sales promotion and advertising for fueloil dealers"
John Morrison, Electrical Association of Philadelphia
"Increasing the scope of the service of a trade association to its dealers"
F. S. Burroughs, National Secretary, Distribution Div., OHI
"Objectives of the Distribution Division for 1952"
6:00 P. M.—Chapter Secretaries Annual Dinner
7:00 P. M.—Oil Heat Old Timers' dinner-entertainment
10:00 P. M.—Exposition closes

THURSDAY, APRIL 17, "DEALER DAY"

9:30 A.M.—Dealer Session, *J. H. B. Albert, Chairman*
Lionel L. Jacobs, Moderator
Speakers: Joseph W. Butler, Butler Oil Corp. and Deputy Auditor General, Commonwealth of Pennsylvania
"The outlook for oil and cooperation with OIIC"
Frank J. Boyce, Ray Heat & Power Co.
"Commercial-industrial sales"
Leslie A. Falk, Wisconsin Ice & Fuel Co.
"How to build domestic sales"
C. M. Blickensderfer, Sinclair Refining Co.
"Service and public services"
1:00 P. M.—Exposition opens at Commercial Museum
6:00 P. M.—Exposition closes
6:00 P. M.—General industry cocktail hour
8:00 P. M.—Annual OHI banquet and entertainment, *A. T. Atwill, Toastmaster*

FRIDAY, APRIL 18

1:00 P. M.—Exposition opens at Commercial Museum
6:00 P. M.—Exposition final closing

List of Exhibitors*

National Oil Heat Exposition

Commercial Museum, Philadelphia
April 14-18, 1952

Ace Engineering Co. (853)
Attending: I. L. Schurman, J. W. Cowan, R. W. Bardach, Jr.
Exhibiting: Horizontal rotary oilburners.
New Product: Curved slottage linkage, justifies air & oil ratio.

Acme Electric Corp. (703)
Attending: W. E. Wilson, G. W. Mabey, Clyde Myers.
Exhibiting: Ignition transformers.

Airtemp Division (5)
Attending: William B. Magill, J. F. Knoff, Malcolm T. Bard, J. R. Donley.
Exhibiting: Oilfired furnaces, Hi-Boy & Lo-Boy; Year 'round air conditioning; conversion oilburners.

Aldrich Co. (709)
Attending: P. M. Stephenson, E. L. Fox, L. R. Williams, B. Mulder.
Exhibiting: "Heat-Pak" steel heating boilers, conversion oilburners.
New Products: Interchanging oil-gasburners.

Allied Tank Truck Equipment Co. (368)
Attending: David J. Constantine, Al Aspen, Maxwell S. Constantine, Lou Goldfield.
Exhibiting: "Rebel" tank truck.

American Artisan (Space D)
Exhibiting: Publication.

American Clay Forming Co. (967)
Attending: Paul E. Buckles.
Exhibiting: Light weight refractory combustion chambers.

American Radiator & Standard Sanitary Corp. (960)
Attending: D. J. Quinn, H. M. Carnahan, W. T. Reed, H. C. Day, W. G. Senft.
Exhibiting: Winterway & Winterglo winter air conditioners; Arcoliner boiler; Oakmont boiler; Arcoflame oilburner; Heatrim panels; Radiantrim panels; Sunrad radiator.
New Product: Heatrim panels (baseboard convectors).

Anchor Division (713)
Attending: J. L. Meagher, Bryant Doty, L. E. Litkenhous, N. J. Griffon, M. M. Whorley.
Exhibiting: Oilburners and oilfired boilers.
New Product: Commercial & semi-industrial pressure burners; domestic oilfired boilers.

Armstrong Machine Works (870)
Attending: O. E. Ulrich.
Exhibiting: Steam traps; hot water heating system control.
New Product: 3-way valve.

*As of March 24.

Atlantic Steel Boiler Co. (920)
Attending: John C. Barnes, Joseph A. Carlin, R. K. Barnes, J. A. Greway, R. L. Clewell, Paul J. Thompson, John L. Douglas.
Exhibiting: Atlantic water tube boiler; #500 complete heating package.
New Product: #500 heating package.

Auto-Flo Corp. (356–2)
Attending: Milton Perlman, Donald B. Sutherland, Joseph Perlman.
Exhibiting: Automatic humidifier.

Automatic Devices Co., Inc. (118)
Attending: Henry T. Kucera, O. W. Dobson, Curtis Soderberg, Marty Heffler.
Exhibiting: Weather controls, including Weather-man, Weather-chron, Weather-flo regulators; outdoor controls for regulating heat.
New Product: Weather-flo regulator.

Bacharach Industrial Instrument Co. (462)
Attending: John W. Smith.
Exhibiting: FYRITE combustion testing kits, including Master and Utility kit and Vaporizing Burner Adjusting Kit; FLORITE direct reading velocity meter; TEMPSCRIBE temperature and operation recorders; sling psychrometer.

Bell & Gossett Co. (454)
Attending: E. J. Gossett, R. E. Moore, C. E. Pullum, R. A. Patterson, Frank C. Hackett, factory personnel and district representatives.
Exhibiting: Hot water heating specialties.

Bethlehem Foundry & Machine Co. (313)
Attending: Ray Dietz, Carl Wagner, James Meissner.
Exhibiting: Conversion oilburners; Dynatherm and Crusade-a-therm units; warm air furnace.
New Product: Conversion burners.

Boston Machine Works Co. (104)
Attending: Ralph L. Dennis, I. M. Nelson, H. Cutter Walters, W. P. Pohle.
Exhibiting: Apthorp nozzles; Clearview tank gauge; Ideal nozzle extractor; Boston-Standard draft control; Instant-Glo combustion chambers; nozzle kits; chrome steel "Hang-Down" baffles, Boston Breeze horizontal burner.

Bowser, Inc. (171)

Bryant Heater Division (352)

Buckeye Furnace Pipe Co. (122)
(See Windmaster Corp.)

Burnham Corp., Boiler Division (459)
Attending: V. A. Good, H. N. Jones, F. R. Brophy, A. A. Miller, E. J. Sabeck, F. Bacon, J. J. Hogan, H. R. Way, W. C. Heagy, T. S. Rafferty, W. H. Phillips, Flody E. Adams.
Exhibiting: Pacemaker and Yello-Jacket boiler-burner units; radiant radiators; Base-Ray radiant baseboard.
New Product: Pacemaker boiler with super tankless coil.

Century Engineering Corp. (259)
Attending: B. J. Lattner, J. O. Rosche, H. J. Stites, H. W. Potter, M. D. Puckett, C. J. Walker, R. V. Hall, W. W. Stevens, R. F. Considine, G. F. Jones, J. B. O'Donnell.
Exhibiting: Counter-Flow furnace units; basement winter air conditioners; gravity furnaces and hot water boilers.

Cities Service Oil Co. (A–2)
Attending: Engle Parker and 14 retail fuel-oil salesmen.
Exhibiting: Oilburners, fueloil.

Cleaver-Brooks Co. (909)
Attending: J. Verne Resek, Howard McCoy, Kimball Carhart, Francis Hopp, Nate Feldman, Frank Knorr, Walter Gilbert, Frank Wymbs, Richard Chadwell.
Exhibiting: Industrial and commercial burners; oil and gas combination burners.
New Product: 40 gph burner; oil and gas combination burners.

Columbia Boiler Co., Inc. (1055)
Attending: H. J. Loughney, F. I. Boarman, John J. Meade, John G. Howley, R. W. Boarman.
Exhibiting: Steel house heating boilers; high pressure steel horizontal return tubular boiler; oilburners.
New Product: Round tubeless boiler.

Combustion Control Corp. (263)
Attending: Walter F. Featherstone, Kenneth Blaine, L. D. Sibley, B. E. Shaw.
Exhibiting: Industrial and commercial flame failure safeguards and programming controls, with models employing standard Fireye combustion safeguards and Firetron electronic flame scanner; Fireye smoke indicator.

Combustioneer Division (106)
Attending: C. P. Meredith, D. L. Getz, G. Roudanez, G. A. Crabbe, J. W. Albright, W. O. Spencer, H. E. Gahnz, R. M. MacDonald, C. S. Overcashier, R. F. Kissell, W. A. Sayler, C. Pidcock, P. H. Chamberlain, A. R. Massman, O. J. Puckett, G. Crew.
Exhibiting: Combustioneer dLP oilburners; Combustioneer Aristocrat and Hi-Boy oil furnaces; DIR fuel pumping unit; "Free-Floating" piston.

Commercial Filters, Inc. (512)
Attending: R. L. Fielding, J. R. Chisholm, R. P. Nichols, H. C. Corwin, R. Schadler.
Exhibiting: FULFLO filters and tubes.

Davis Engineering Co. (760)
Attending: A. O. Jaeckel, R. Lisson, G. Fox, L. Nigro, J. Entin, M. Savoy, S. Dvorak, B. Lampe, C. Smith, R. Daubner.
Exhibiting: Fueloil heaters; water heaters; flexible nipples.
New Product: PARAPROBE and PARACOIL type "GF" fueloil preheaters.

Delavan Mfg. Co. (3)
Attending: David T. Morgenthaler, E. O. Olson, H. L. McNally, C. K. Elder, J. J. Elder, B. S. Goreham, W. E. Safris, N. B. Delavan.
Exhibiting: Oilburner nozzles and accessories; sludge solvent; Hally nozzle filters; servicemen's kits.

Space No.

Delco Appliance Division (451)
Attending: A. C. Freimann, J. F. Warren, Stuart Rice, E. N. Pease, W. C. Huber, W. K. Underkoffler.
Exhibiting: Conversion burners; oilfired boilers; air conditioners.

Delco Products Division (771)
Attending: J. N. Tilbrook, S. A. Bratten, C. L. Holverstott, J. R. Lakin, C. R. Knowlton, S. W. Blanton, C. A. Volkstadt, W. T. Baxter, J. R. Perkins, L. C. Bond, J. W. Brumley.
Exhibiting: Electric motors.

Detroit Lubricator Co. (270)
Attending: E. J. Doucet, K. B. Thorndike, H. L. Walker, W. H. Hohmeyer, G. W. Yorgen, R. M. Bard, S. A. Anderson, J. W. Carlson, S. E. Leinwand, N. L. Sell.
Exhibiting: Oilheating controls, including manual float valves, electric float valves, non-electric float valves.

Space No.

Dielectric Products Co. (363)
Attending: Henry T. Carey, Phil Krueger, Ted Roman.
Exhibiting: Oilburner electrode insulators and assemblies; bus bars.

Dixon Mfg. Co. (970)

Dole Valve Co. (863)
Attending: J. F. Lund, H. H. Aronson, S. G. Phillips, C. E. Miller, Jr., Mitchell Love.
Exhibiting: Air and vacuum valves; flow controls; automatic hot water valves; water mixers and thermostatic air controls.

Domestic Engineering (917)
Exhibiting: Publication.

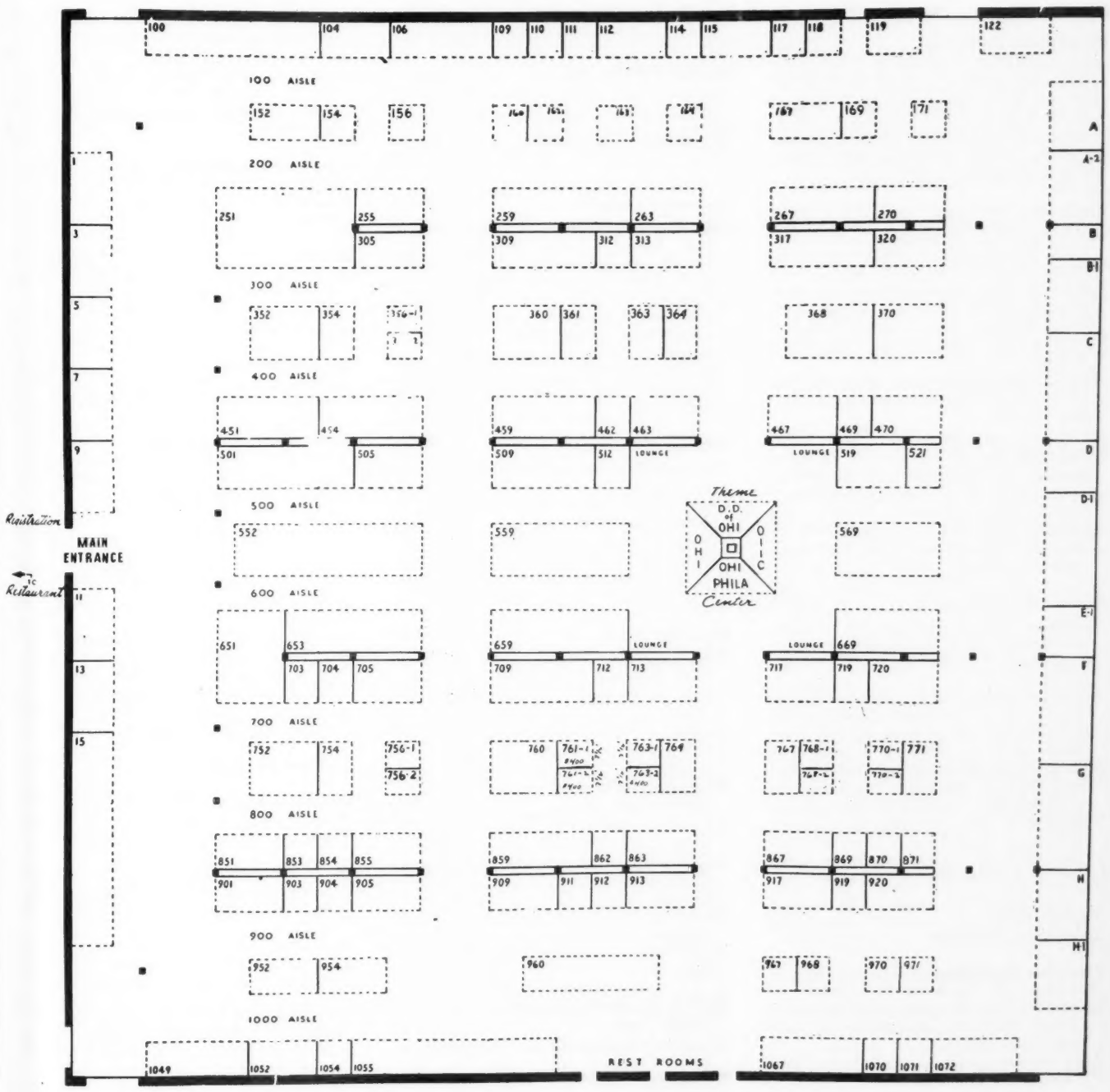
Eckhart Mfg. Co. (903)
Attending: Arnold Eckhart, Sr., Arnold Eckhart, Jr., Walter E. Eckhart.
Exhibiting: Silent Korth oilburners.
New Product: Model HGK flanged for use with furnaces and boilers.

Space No.

Eclipse Fuel Eng. Co. (B–1)
Attending: J. Sands, E. E. Magnuson, A. Wilcox, J. M. Quick.
Exhibiting: Scotch Marine boiler with combination oil-gasburning unit.
New Product: Fyr-Matic combination oil-gasburners.

Econo Products Co. (871)
Attending: R. E. Van Norstrand, John F. Glump, William Herman, John T. Lordan, L. A. Schultz.
Exhibiting: Hot water circulators; flow control valves; pressure regulating and relief valves; flow fittings; low water cut-offs.

Eddington Metal Specialty Co. (717)
Attending: Wesley Czarnecki, Stanley Czarnecki, Walter V. Czarnecki, Jr., Casimir M. Czarnecki, Walter B. Stamberger, Jr., Vincent Devine.
Exhibiting: Nozzles, filters, strainers, air cones, stabilizers.



Space No.

Enterprise Engine & Machinery Co. (162)
Attending: V. M. Douglas, N. Feldman, J. N. Brophy, P. I. Birchard.
Exhibiting: Combination oil-gasburner; P.D. metering pump.

Field Control Division (152)
Attending: C. W. Potter, Lee Beardsley, H. J. Potter, Fay L. Kinne, George Peterson, Fred Bartlett, Mark Acheson, Wayne Davis, Russell Glass, J. R. Starnes, Paul Jett, Fred McGee, Wilfred H. Smith, R. J. Milholland and W. F. Hirsch.
Exhibiting: Barometric draft controls.
New Product: M-G Field control.

First National Bank of Philadelphia (968)
Attending: Gordon Kingsberry, Robert Lowery, Edward Jefferis, Ralph Shepherd, Lou Tinizia.
Exhibiting: Plan for installment financing of automatic heating installations.
New Product: Special contract and credit application combination for installment sales.

Fitzgibbons Boiler Co. (509)
Attending: P. K. Addams, J. R. Collette, G. Nelligann, W. O. Spiess, E. N. Black, W. C. Wetherstine, Jr., L. T. Bright, G. T. Kohler, E. W. Skoglin, Sr., R. J. Wickel, F. A. Dockeray, C. R. Anderson.
Exhibiting: 200 & 400 boiler-burner units; Eighty & RZU Jr. series boilers.

Fluid Heat Division (651 & 701)
Attending: M. J. Donahue, D. G. Knowles, A. E. McAvoy, H. E. Johnston, W. S. Howland, E. F. Long, F. E. Bero.
Exhibiting: Wall flame and gun type conversion burners; forced air furnaces with rotary and gun burners; rotary and gun fired boilers; counterflow and suspended furnaces.
New Product: Rotary fired boiler and furnaces; suspended furnaces; rotary conversion burner.

Fluid Systems, Inc. (1054)
Attending: A. G. Purdue, C. L. White, G. S. Smith, W. A. Pond, G. P. Sullivan, R. F. Gill, M. J. Tobin.
Exhibiting: Thermal Electric system of transporting and heating No. 6 oil from unheated storage.

Fueloil & Oil Heat (851)
Attending: Robert Gray, A. G. Winkler, Lee Steedle, H. J. Hannigan, Bert Dunphy, Samuel R. Rutter, J. W. Schulz, A. C. Esser.
Exhibiting: FUELOIL & OIL HEAT magazine; Beacon Boiler Reference Book; Beacon Radiation Reference Book; Specifications Book of Oilburners and Fueloil; The Selling Man; Basic Service Text for Pressure Burners; Oilheating Handbook and reprint booklets: Fueloil Handling, Heading Off Trouble, Installing the Domestic Oilburner, Low Pressure Burners, Oilheating Snags, Vaporizing Burner Service, Wall Flame Rotary Oilburners.

Fueloil News (912)
Exhibiting: Publication.

Gasoilair Equipment Co. (756–2)
Attending: D. Kaufman, S. Kaufman.
Exhibiting: Safe-fill nozzle plug; barrel "air pump" dispenser; litharge and glycerin pipe joint compound.
New Product: Safe-fill nozzle plug; barrel "air pump" dispenser.

Space No.

General Automatic Products Co. (9)
Attending: Harold F. Browning, Charles E. Hight, Howard J. Hughes, Claude W. Schaefer, Walter Way.
Exhibiting: Conversion oilburners; oilfired boilers; warm air units; "Floorlevel" baseboard radiation; De-Airator tank.

General Electric Co., Air Conditioning Dept. (569)
Attending: S. J. Levine, L. E. Thompson, W. L. Sneltjes, W. A. Mulcock, R. H. Stearns, H. N. McMenimen, Jr., E. V. Whiteley, A. K. Tower, G. W. Hart.
Exhibiting: Oilfired boilers and furnaces.

General Electric Co., Apparatus Department (7)
Attending: C. D. Pease, J. B. O'Connor, W. F. Brunner, P. Gomex, C. J. Ossenfort, and other personnel from factory and field organization.
Exhibiting: Domestic oilburner controls; SM ignition transformers; oilburner motors; fan and blower motors.
New Product: New form "G" motor; new quartz rod flame detector unit.

General Filters, Inc. (901)
Attending: Robert G. Gregory, Roland A. Redner & Mrs. Grace Redner.
Exhibiting: Fueloil filters.
New Product: 2A-17 fueloil filter for heavy oils.

General Fittings Co. (855)
Attending: H. F. Horton, John J. Cotter, Jack Jones, Charlie Maine, Vaughn Gooding, John Belham, Bill Near, Robert F. Hull, William G. Simms.
Exhibiting: Tankless water heaters; industrial instantaneous water heater; thermostatic water mixing valve; Testite cast bronze solder fittings; pipe unions.
New Products: Special tee for Fin-Tube baseboard radiators; all-copper tankless water heater.

General Metals Co. (162)
(See Enterprise Engine & Machinery Co.)

Girard Trust Corn Exchange Bank (B)
Attending: Frank C. Heebner, Robert A. Kennedy, W. E. Lutz, Richard T. Taylor.
Exhibiting: Finance plan for oilheating equipment.

Gulf Oil Corp. (F)
Attending: D. T. Shaver, F. A. Gibbons, E. D. McGurk, C. W. Letsch, L. J. Spingler, R. E. Jones, T. F. Maher, F. S. Taylor.
Exhibiting: Gulf Solar Heat; branded dealer program.

Harbison-Walker Refractories Co. (370)
Attending: Robert R. Miller, John W. Mull, James Mitchell, John R. Hewitt, Carl Willenbrock, Frank Wilson, George W. Webster, Joseph D. Custer, William Corban.
Exhibiting: Complete line of refractory products.
New Product: Lotherm combustion chambers.

Harlan & Hollingsworth Tank Corp. (156)
Attending: Herbert Seltzer, William Hacker.
Exhibiting: Domestic fueloil storage tank.

Space No.

Sid Harvey, Inc. (1067)
Attending: Sid Harvey, Lawrence Harvey, J. R. Ziminski, Walter L. Bernard, Leslie Algan, Ted Lindtveit.
Exhibiting: Rebuilt pumps, relays, controls, circulators, transformers, etc.

Harvey-Whipple, Inc. (267)
Attending: Ray G. Whipple, Walter O. Harvey, Theodore A. Hodgdon, George Dunn, George Hoyer, Lowell B. Meinerz, Samuel Wallans, Donald Sinclair, Ray Babcock.
Exhibiting: Master Kraft oilheating equipment.

Heating, Plumbing & Equipment News (114)
Exhibiting: Publication.

Heil Co. (501)
Attending: D. E. Fricker, George Hochstein, H. F. Pugh, John Barclay, Arnold Meyer, J. F. Heil, Sr., Roy King, William Schumacher, Karll Mould, Fred Brubaker, J. F. Heil, Jr., David Cunningham, William Chester, Jr.
Exhibiting: Domestic heating equipment.

Herco Oil Burner Corp. (521)
Attending: Harry Rohrer, Harold Wilkinson.
Exhibiting: High pressure, gun type oilburners.

HomEase Products Division (164)
Attending: Edward G. King.
Exhibiting: Complete line of oilburner equipment.

Hoover Co. (154)
Attending: A. E. Ott, R. A. Potter, R. F. Carey, C. W. Beam, W. A. Pizzini, J. S. Todd.
Exhibiting: Electric motors.

International Heater Co. (954)
Attending: H. F. Randolph, W. A. Matheson, Jr., Millar Wheeler, I. C. Barber, N. R. Foloky.
Exhibiting: Oilfired console; gravity, Hi-Boy and Counterflow steel furnaces; gravity and forced air cast iron furnaces; cast iron boilers.

Iron Fireman Mfg. Co. (552)
Attending: W. J. O'Neil, C. T. Burg, E. C. Webb, Dale Wylie, Paul Bailey, Richard Wright, Joseph Porter, Peter Storti, H. B. Evans, Melvin E. Nemec, Newton E. Darrah.
Exhibiting: High pressure domestic oilburners; oilfired boiler and furnace-burner units; horizontal rotary oilburners; commercial-industrial oil-gas burner.
New Product: Channel Flame burner with electric ignition; horizontal oil furnace.

Jackson & Church Co. (11)

Jefferson Electric Co. (E–1)
Attending: C. T. Harnett, D. S. Hevner.
Exhibiting: Oilburner ignition transformers.

S. T. Johnson Co. (1049)
Attending: J. C. Johnson, Robert P. Johnston, W. S. Harlacher, W. Thoms, W. E. Lees.
Exhibiting: Conversion oilburners; combination gas-oilburners; oilfired boiler and furnace-boiler units; water heaters.

Kaustine Co., Inc. (859)
Attending: J. B. Mollnow, Sr., R. E. Preine, Maurice Gutman, W. F. Stahl, J. B. Mollnow, Jr.
Exhibiting: Oilfired winter air conditioners.

Space No.

Kent Co. (117)

Attending: R. Morris, E. P. Wittschiebe, Joe Hugues, P. T. Hugues, Paul Young.
Exhibiting: Double suction furnace and boiler cleaner.
New Product: Tubular boiler flue cleaning brush.

Kleer-Kleen Mfg. Co. (361)

Attending: Owen J. Eash, R. D. Fish.
Exhibiting: Oilburning floor and wall furnaces.
New Product: Kleer-Kleen vaporizing oilburners with electric ignition.

Major Oil Burner Co. (160)

Attending: W. H. Rogers, J. Keily.
Exhibiting: Boiler-burner units; conversion oilburners.

Manville Boiler Co., Inc. (952)

Attending: B. Mandelburg, C. J. Lederer, H. D. Monday, Stewart W. Greenleaf, F. E. Bottiger, H. A. McDermott, Earl T. Peck.
Exhibiting: Thermo-Flo steel tubeless boilers.

Marietta Metal Products Co. (470)

Attending: John Hancock, Paul Commaker,
Exhibiting: Domestic steel heating boilers.

May Oil Burner Division (13)

Attending: H. A. Spott, C. R. Collins, E. R. Schuelke, J. O. Miller.
Exhibiting: Conversion oilburners; boiler-burner units; Low-Boy and Hi-Boy winter air conditioning units.

McDonnell & Miller, Inc. (305)

Attending: E. N. McDonnell, Nils Swanson, George LaRoi, Leo Kmiecik, John James, Howard Peary, James W. Ramsay, W. E. Gleeson, Al Behrens, John Dobise, Merrill Blankin.
Exhibiting: Safety devices for steam and hot water boilers; Float Valves for warm air furnaces.
New Product: No. 18 Series Float Valves for humidification; No. 201 Temperature Relief Valve for hot water storage systems.

Mercoid Corp. (519)

Attending: I. E. McCabe, Hugh Courteol, J. W. Ownes, R. F. Fisher, W. K. Stauffer, W. L. Colterjohn, W. E. Jones, William Ufer, F. C. Hayes, Ken Reiley, William Whalen, F. W. Ayer, E. S. Sarson, J. A. Johnson, J. F. McCauley.
Exhibiting: Mercury switch type automatic controls, explosion-proof controls with Mercoid Visaflame.
New Product: New Mercoid Visaflame.

Metromatic Mfg. Co. (905)

Attending: Fred DeAngelo, Robert W. Pyne, George C. O'Connor, Wendell F. Austin, Albert J. Axtman, Frederick Nalley, Frank X. Pyne, B. W. Cosentino, Gilbert Bortone.
Exhibiting: Metropac forced warm air furnaces and gun type oilburners.

Miller Co. (1072)

Attending: B. G. Tremaine, H. S. Beagle, R. W. DeLancey, W. J. Sullivan, R. W. Beyland, H. F. Meehan, D. F. Haskell.
Exhibiting: Flange mounted—mechanical draft — vaporizing oilburners; controls for furnaces and boilers.

Space No.

Minneapolis-Honeywell Regulator Co. (15)

Attending: H. W. Sweatt, C. B. Sweatt, Tom McDonald, Kent Wilson, Tom Reed, Lloyd Hamilton, Chas. C. Cochron, D. J. Peterson, Arnold Michelson, Herbert Williams, William Brown, John Smith, George Hoeffel, Al Koch, John Dorsey, Al Mitchell.
Exhibiting: Automatic controls for domestic and industrial oilburners; V4001 delayed oil valve; V5000 dribble proof valve.
New Product: Complete line of Aquastats.

Monarch Mfg. Works, Inc. (360)

Attending: T. W. Murphy, E. B. Frame, J. M. Carroll, R. F. Stone, J. C. Underwood, C. E. Fink, W. M. Fink, E. H. Granse, V. B. Kathe.
Exhibiting: Oilburner nozzles; combustion heads; air mixing equipment; regulating valves and strainers.
New Products: Nozzle and firebox slide rule selector; all-metal nozzle box.

Morse-Smith-Morse, Inc. (712)

Attending: John C. Dieselman.
Exhibiting: FIROMATIC safety valves; tank gauges; filters; vent caps; thermal switches.

L. J. Mueller Furnace Co. (G)

Attending: F. J. Nunlist, Jr., H. B. Smith, L. N. Zimmerman.
Exhibiting: Oilfired heating and air-conditioning units.

National Airoil Burner Co. (C)

Attending: John F. Straitz, Walter A. Horko, D. D. Delaney, Gordon M. Bitterlich, D. L. Whittemore, R. W. Reamer.
Exhibiting: Industrial and domestic oilburners.
New Product: Small capacity JO Nairoil residential oilburner.

National Fuel Conservation Co. (169)

Attending: Michael A. Crozier, William R. Landmesser, Edward R. Fiske, E. R. Fiske.
Exhibiting: HEAT-LOCK and THERM-O-GLO.

Norge Heat Division (115)

Attending: J. M. McNamara, L. J. Studnicky, C. S. Davis, Jr., J. W. Pulkinghorn, M. A. Straub.
Exhibiting: Oilburning air conditioners, hi-boys, lo-boys, suspended, counterflow.
New Product: Oilburning counterflow furnaces; convertible winter air conditioners.

Oil Equipment Mfg. Co. (109)

Attending: Arnold Alderman, Sidney Horton, Mitchel Landau, Irving Marinoff.
Exhibiting: Vent caps; King gauges; fill caps, fill box, duplex slip-thru tank bushings.
New Product: Duplex slip-thru tank bushings.

J. V. Patten Co. (1)

Attending: Don C. Patten, John H. Patten, A. A. Boyle, S. F. Gitterman, E. H. Lambert, Shepard Herman.
Exhibiting: Convertible oil-gas furnaces.

Penn Controls, Inc. (867)

Attending: Carlos Morgan, J. W. Forbes, George Sander, C. P. Pestow, R. L. Ratliff, R. V. Clark, R. H. Luscombe, A. B. Ralph, E. B. Maire, J. F. Kinney, F. X. Fessler, A. W. Barr, R. S. Penn, J. G. Moravec, H. D. Gray, H. C.

Space No.

Shilling, J. E. Corbett, Orr Sanders, R. L. Persons, R. D. Eichman, H. S. King, K. M. Fisher and E. R. Tassin.
Exhibiting: Automatic heating controls.
New Product: Dual hot water controls for remote bulb applications.

Pennsylvania Co. for Banking & Trusts (354)

Attending: John W. Yust, John Drummy, C. Harkins, C. Supplee, A. Jarvis.
Exhibiting: Banking.

Pentwater Machinery Corp. (763)

Attending: Bernard E. Konopka.
Exhibiting: Pentwater Whirl-A-Jet fueloil lift pumps.

Perfex Corp. (669)

Attending: C. E. Lewis, V. P. Black, A. G. Butler, H. D. Cook, H. Hackett, J. Holzhuer, C. Jensen, J. McGuire, P. Neess, R. Pratt, E. Spall, A. Kornitz, G. LeFevre.
Exhibiting: Automatic controls for heating systems; Checktrol used for checking controls for defects.
New Product: Prima-Ray.

Petroleum Heat & Power Co. (H)

Attending: Ralph S. Thoresen, John F. Corrigan and members of their staff Also: J. R. Arden, J. Dugan, W. Dunklee, L. Shuster, J. Sullivan, R. Trautman.
Exhibiting: Complete line of domestic, commercial-industrial oilburners; oilfired furnace-burner units; boiler-burner units; oilfired water heater.
New Product: Petro model GW industrial combination gas-oilburner; model CA-1 domestic electronic oilburner.

Plastic Appliance Co. (356)

Attending: J. C. Smith, R. Gardner, William Bannister.
Exhibiting: Fill vent box and spill guard.

Plumbing & Heating Business (1071)

Exhibiting: Publication.

Preferred Utilities Mfg. Corp. (752)

Attending: R. S. Bohn, J. S. Kaplan, M. Sherman, W. H. Bohn, E. L. Webster, R. T. McComas.
Exhibiting: Preferred unit steam generator; horizontal rotary oilburner; Draft-A-Juster; hot water heater; oil circulation preheating system.
New Product: Hot oil line preheating system.

Price Fireplace Heater & Tank Corp. (111)

Attending: Stanley Grady, H. Gordon Miller.
Exhibiting: Oil tanks.

Pullman Sales Corp. (719)

Attending: Stanley Berns, Robert Berns, Jack Welker, Norman Rudy, Alex McCall, Harold Goodwin, James Ryan.
Exhibiting: Pullman boiler and furnace vacuum cleaner.

Purolator Products Inc. (167)

Attending: E. B. Glendenning, W. M. Kane, M. J. Stoltz, George Owens.
Exhibiting: Complete line of filters; serviceman's kit for cleaning boilers.

Quiet Automatic Burner Corp. (971)

Quiet-Heet Mfg. Corp. (854)

Attending: S. L. Peters, E. M. Peters, P. Komroff, B. Sachs, H. M. Spitzer.
Exhibiting: Oilburners and brass sump pumps.

Quincy Stove Mfg. Co. *Space No.* (110)
Attending: H. D. Tow, Clarke T. Welsh.
Exhibiting: Wall-O-Matic Monogram oil wall furnace; oilfired Monogram space heater.
New Product: Thermatic temperature and fan control.

RCS Tool Sales Corp. (320)
Attending: Francis S. Russell, Thomas M. Sweeney, E. R. Meyers, Ray Westlund, Dale Davis, Carl A. Longanecker.
Exhibiting: Super saw, blades and kit; Milwaukee and Super Pet drills.
New Product: Model T super saw and Vise-Lok blades.

Radiant Utilities Corp. (862)
Attending: Jacob G. Goldberg, Arthur A. Marcus, Julius S. Goldberg, Joseph Bloom.
Exhibiting: Oilburners.
New Product: Model 2½ S.P. burner.

Rochester Mfg. Co. (704)
Attending: C. L. Hastings, William J. Debler, Sr., William J. Debler, Jr., Samuel Skner, Martin Brown, Daniel Freedman, Don Donahoe, W. Chase, J. W. Kershaw.
Exhibiting: Universal direct reading oil tank gauge, test kits, vacuum and pressure gauges.

Scott-Choate Publishing Co. (869)
Exhibiting: Publication.

Scully Signal Co. (1052)
Attending: Frank P. Scully, Carl A. Goddard, Arthur Gray, W. G. Rowell, F. P. Scully, Jr., Harold Forrest.
Exhibiting: VENTALARM Signal; combination VENTALARM gauge; Scully gauge; FASFILL connectors; REMOTAMATIC control.

Shell Oil Co. (112)
Attending: G. R. Stevens and Al Mickle.
Exhibiting: Shell fueloil with FOA-5X.

Sinclair Refining Co. (364)
Attending: Richard H. Nightingale, John P. Burgoyne, Charles D. Journey, George W. Brinok, Sr., Vincent J. Del Duca.
Exhibiting: Anti-rust and corrosion additive, RD-119.

Skuttle Mfg. Corp. (312)
Attending: A. L. Evans, E. A. Wilson, Jr., S. Evans, William J. Debler, V. E. Devine, W. B. Stamberger, R. W. Franks.
Exhibiting: Humidifiers; MORNING COMFORT controls.
New Product: MORNING COMFORT controls.

H. B. Smith Co. (463)

Snips Magazine (904)
Exhibiting: Publication.

Sparkler Mfg. Co. (911)
Attending: G. Harry DeGraw, Mr. Davidson, J. M. Hayman.
Exhibiting: Fueloil filters.
New Product: SH No. 3 filter for stoves and cooking ranges.

Staffco Engineering Co. (919)
Attending: Fred Ravnsbeck, W. F. Arnold, C. H. Chalmers.
Exhibiting: Rotary oilburner; combination gas-oilburner.
New Product: Packaged oilburner units.

Sundstrand Engineering Co. *Space No.* (720)
Attending: R. H. Gustafson.
Exhibiting: Pressure-type oilburners.

Sundstrand Machine Tool Co. (D-1)
Attending: B. F. Olson, L. H. Schuette, C. W. Lang, R. J. Murphy, B. L. Douglass, B. L. Soderberg, J. F. Griffey, O. E. Mayfield, R. E. Stevens, W. R. Kiefer, W. G. Jarvis.
Exhibiting: Fuel units with and without solenoid.

Sun-Ray Burner Mfg. Corp. (309)
Attending: Gabe Marin, Alfred Metzger, Al Luft, Martin J. Sones, Mike Bressen, Henry Nickerson, Emmons Nickerson, John Brecht, Don Caldwell.
Exhibiting: Domestic and commercial conversion oilburners.

Swirling Oil Burner Mfg. Corp. (913)
Attending: J. C. Donella, A. R. Birkins, R. E. Doyle, A. M. Hall, William Sedlack.
Exhibiting: Vertical fired pressure atomizing burners.
New Product: Model A-3 burner.

Taco Heaters, Inc. (H-1)
Attending: J. Balter, Joseph R. Murphy, Robert T. Angevine, William Sliney, Charles Sliney, William P. Klein and Howard Lucas.
Exhibiting: Complete line of hot water heating specialties.
New Product: Steam air valve; Air-Scoop; 3" pump.

Tankit Co. (756)
Attending: Alfred Yurdin, William J. Debler, Alfred Gruelich, Vincent Devine, Walter Stamberger, O. W. Dobson, Joseph Butler.
Exhibiting: TANKITS (for stopping oil tank leaks); NEUTRODA (fueloil deodorant); Water-Finder paste.

Thatcher Furnace Co. (659)
Attending: Stuart Leigh, Jack Ahearn, Joel Leeson, Jack Price, Steve Cheney, Jack Keefe.
Exhibiting: Conversion oilburner; V-Series oilfired Comfortmaster; Oilmaster steam and water boilers; oilfired winter air conditioner.

H. A. Thrush & Co. (A)
Attending: George H. Fox, E. D. Noland, G. O. Johnson, L. D. Grose, W. J. Johnson, R. E. Clegg, T. E. Fahy.
Exhibiting: Complete line of hot water heating specialties.

Timken Silent Automatic Division (251)
Attending: F. M. Jordan, M. F. Robbins, W. J. Chappell, T. D. McCarthy, K. O. Ralphs, J. E. Fahl, T. E. Carson.
Exhibiting: Complete residential oil heat line.

Toridheet Division (653)
Attending: R. J. Lucas, W. J. Smith, Jr., D. W. Reuse, L. F. Dienst, J. A. Lappin, L. D. Clough, J. F. Donnelly, A. W. Herman.
Exhibiting: Rotary wall flame oilburners; pressure-atomizing burners; furnace and boiler-burner units.

Torrington Mfg. Co. (705)
Attending: Dudley B. Robinson, Roger T. Lyman, M. J. Fabbri, A. C. Doty, M. B. Hunting.
Exhibiting: Aristocrat fan blades; Airotor blower wheels; "Coasting Hub."

Turb-O-Tube Furnace, Inc. *Space No.* (255)
Attending: H. J. Carmichael, J. B. W. Carmichael, Don Carmichael, D. L. Haynes, E. Kinkel, Jr.
Exhibiting: Forced air oil furnaces.

Tuthill Pump Co. (469)
Attending: H. T. Kessler, W. J. Wagner, J. D. Young, R. H. Clark, C. W. Olson.
Exhibiting: Oilburner fuel units; domestic and industrial oilburner pumps.
New Product: Model 30A5G Fuelstat and SU10 V-Belt Driven Units for heavy oil.

U. S. Machine Corp. (100)
Attending: Jack Delaney, Carl Riddle, Wes Stevenson, Morry Smith, Ed Kenerson, Bill Macneil, Bill Gaskell, Johnnie Phelan, Don McNally, Glynn Coryell, Joe Warshauer, Walter Blake, Phil Kosch, Claude Potts.
Exhibiting: Winkler high and low pressure oilburners; oilfired wall and floor furnaces; oilfired Universal furnaces; oilfired winter air conditioner and boiler; electric Liftgate.
New Product: L-6 low pressure burner; electric Liftgate.

V & E Products, Inc. (119)
Attending: Lionel Jacobs, Frank Harbin, Walter Moriarty, Bruce Jacobs, Joseph H. Eubanks.
Exhibiting: Wall flame boilers; water tube boilers; boiler-burner units.
New Product: Boiler-burner units.

Walker Mfg. & Sales Co. (764)
Attending: M. O. Land, Laking Meade, A. H. Ziph, Raymond Denning.
Exhibiting: Automatic barometric draft regulators.
New Product: Type 34C-Dom. and Type 34Z draft indicators.

Waterfilm Boilers, Inc. (467)
Attending: Arthur R. Hanson, Edward Wodecka.
Exhibiting: Line of oilfired boilers.
New Product: Complete packaged unit.

Watts Regulator Co. (1070)
Attending: George B. Horne, Cyrus S. Gates, Richard S. Douglas, Benjamin G. Robertson, Ralph W. Giffin.
Exhibiting: Temperature and pressure relief valves; pressure reducing valves; pressure relief valves and regulators.
New Product: Boiler safety relief valves; steam pressure regulators; temperature and pressure relief valves.

Webster Electric Co. (505)
Attending: B. T. Wiechers, J. Lahey, P. Maurice, H. B. Hastings, L. Ehrich, P. G. Crewe, S. A. Loeb.
Exhibiting: Fuel units and ignition transformers.

White-Rodgers Electric Co. (317)
Attending: Jack Searls, Ed Robinson, Arnold Petersen, J. Weigert, Frank Tanler, D. Eggert, Frank Crawford, Roy Horton, Tom Langan, Robert Guberud, C. Garner and Norman Boldt, H. Killinger.
Exhibiting: Complete line of automatic controls for oilheat, including primary controls; warm air and hot water controls; relays; thermostats and indoor-outdoor controls.

(*Please turn to page* 218)

Promote Oilheat with real Money

Washington State Group raises $65,000 annually for three Years

by
Robert G. Elmslie*

IN MAY OF 1951, when the first outdoor posters went up in the Pacific Northwest, accompanied by newspaper advertising, there was launched something more important than an "advertising program."

Actually, it was the reflection of concerted thinking, planning, and acting which had been going on for a period of time among the officers, trustees and membership of the Oil Heat Institute of Washington.

The group had been noting how advent of natural gas made inroads of sales on new equipment in certain eastern and mid-western markets.

The necessity of "doing something" had been stressed at several national convention meetings of the Oil Heat Institute of America and certainly a good deal of constructive thinking went into the proposed "plan" of the Institute for setting up advertising programs throughout the country to meet this kind of competition.

Fortunately for the oilheating industry in the Pacific Northwest this competitive threat was not imminent. Several natural gas export permit applications were filed with the Alberta Provincial Government as early as 1949 but definite actions on these requests were withheld until the Conservation Board appointed by the Alberta Premier, Mr. Mannning, could determine adequacy of supply for both domestic and export use.

Even after an export permit was granted a minimum of two years would expire before the competition was "on the ground." We knew, however, from direct observation of effects in other areas that two years were all too short a time to prepare an adequate program to meet this competition. Visits to eastern markets by others of the Institute had confirmed several important points:

1. Where no organized effort by the oilheating industry was prepared to meet this competition, natural gas moved in and through its "fanfare" of organized publicity literally dominated sales and installations of new equipment. After the initial splurge and capturing of the major part of new sales, expansion by conversion sales reversed the growth of the oilheating dealers, both equipment and oil distributors. Three or four years of being "gassed" disorganized completely the oilheating markets.

2. Where organized resistance was prepared by the industry, oil heat continued to share in the normal market expansion.

The inference was quite obvious—only one course appeared open to forward thinking dealers. This was that a program should be prepared well in advance of the advent of competition that would create sufficient "back fire" to keep those markets in which substantial preference presently existed and to expand in all other markets.

In order to thoroughly acquaint the industry with the underlying facts and describe what actually happened in markets where competition was already being experienced, a series of sectional meetings throughout the State of Washington were held in the fall and winter of 1950-51. All segments of the industry were contacted and the sectional meetings brought the "competitive picture" home to many of the dealers.

The plan for raising funds followed generally that outlined by O.H.I. of America—retail oil dealers were requested to support the program at 1/20¢ per gallon on all sales of distillate heating oils only (Black oils were excluded from calculations).

Retail equipment firms and local

Robert G. Elmslie

*Managing Director, Oil Heat Institute of Washington, Seattle.

manufacturers contributed on the basis of $1.00 per unit, manufactured, sold or installed. Support for the program was also solicited from other interested groups allied to or affiliated with the oilheating industry.

The determination was made early in the promotional part of the program to establish certain safeguards that would insure confidential treatment of all records of gallonage delivered or heating units sold and installed by individual dealers. A manual of "Operating Procedures" was prepared that outlined the basic provisions of all procedures to be followed in administering the program.

The portion of this manual of special interest to others of the industry are those covering Contracts, Collection of Funds and Disbursements and Duties of the Executive Committee. The Contract Section covered the essential details of the contract to be signed by the dealer (a three year contract) and the confidential reports of gallonage or units sold to be prepared —the Collection of Funds and Disbursements sections pointed out that all reports and payments should be made to the Seattle Trust and Savings Bank — Trust Department — and all records would be kept confidential by the Bank. Similarly all funds received were earmarked for this special advertising fund and kept separate from regular O.H.I. of Washington monies.

The Executive Committee Section administered the program, including selection of advertising agency, copy to be prepared and media to use.

Originally the program was designed to operate simultaneously in Washington and Oregon and materials prepared through most of the beginning months of the program were in quantities sufficient for both states. Unfortunately the dealers groups in Oregon were unable to get their program sufficiently organized to participate in the immediate program. Responsibility for organizing and promoting their part of the joint participation was delegated to them without tangible results. The balance of the program throughout Washington, however, came very close to meeting the budget set up for the 1951-52 fiscal year.

The Executive Committee secured proposals from several advertising agencies before selecting the Pacific National Advertising Agency to handle our program—this ad agency working very closely with O.H.I. prepared several original pieces of material to assist in the dealer presentations. Noteworthy was the four page brochure outlining the salient parts of the program and the need for support on a "self preservation" basis. In addition the Oil Heat Institute of Washington's office prepared a number of bulletins outlining significant portions of the general plan.

One of the early decisions was the theme or slogan of the program. After considerable study the decal in the form of the O.H.I. seal was selected carrying O.H.I. of America's slogan "Better Heat with Oil Heat."

From this beginning, intensive solicitation was made during May, June, July and August, 1951, to bring more and more dealers and communities into the plan. The best dealer representation and programs were developed in Seattle, Tacoma, Everett, Mt. Vernon and Spokane. One dealer in Leavenworth, Smith & Hart, an early subscriber to the program, we were able to assist by placing our material in the local weekly newspaper.

The original budget provided for a series of eight billboards to be changed monthly, some 30 weeks of newspaper advertising and 26 weeks of radio, through joint sponsorship of the Sunrise Salute, a morning program, and the Housewives Protective League, an afternoon quarter-hour show. Both of these programs originated in the studios of KIRO with program and commentary featuring Paul West, who has a considerable following in the Pacific Northwest.

It was finally decided to carry each board two months, alternating space between two outdoor firms each month so while the same board appeared for 60 days it was in two locations. A 50% showing was booked and, in Spokane for example, that meant 10 board locations each month.

The first billboard of the series was "Better Heat with Oil Heat" our slogan, followed by the large seal as the number 2 Board and then continued with—Oil Heat is Comfortable
Oil Heat is Clean
Oil Heat is Economical

The last of the present series will again carry a large seal in the middle with the other slogans grouped around it as spokes of a wheel.

We would like to call particular attention to the "Oil Heat is Clean Heat" board. It was posted during November and December when other postings carried lots of color. The background of this board was white and a special paper was used to maintain that whiteness during its entire showing. It caused a considerable amount of comment and had the desired effect of focusing attention on the board. We suspect that a lot of people kept waiting for us to add other material or copy.

The series of newspaper ads were noteworthy in that while the themes were on the various points of advantage of oil heat, they continued to carry the same general messages displayed on the outdoor copy.

The whole plan of sales promotion and public relations was further tied

Illustrated are exhibits of the integrated advertising and promotion program applied by the Oil Heat Industry of Washington, starting in May, 1951. It is a concerted, ambitious program which is especially noteworthy because it was inaugurated far in advance of the imminence of natural gas.

Here are the facets of the program:

Outdoor boards—8 boards in a series—50 percent showings.

Newspaper advertising—30 week schedule in major market areas.

Radio—a morning show, "Sunrise Salute," with chatty commercials, and an afternoon show, "Housewives' Protective League," for 26 weeks.

Direct Mail—Letters to dealers, envelope stuffers to consumers, and dealer mailing piece, "Oil Heat News." The latter is a chatty type four page booklet, slanted to feminine readership.

Tie-in mats for use of dealers.

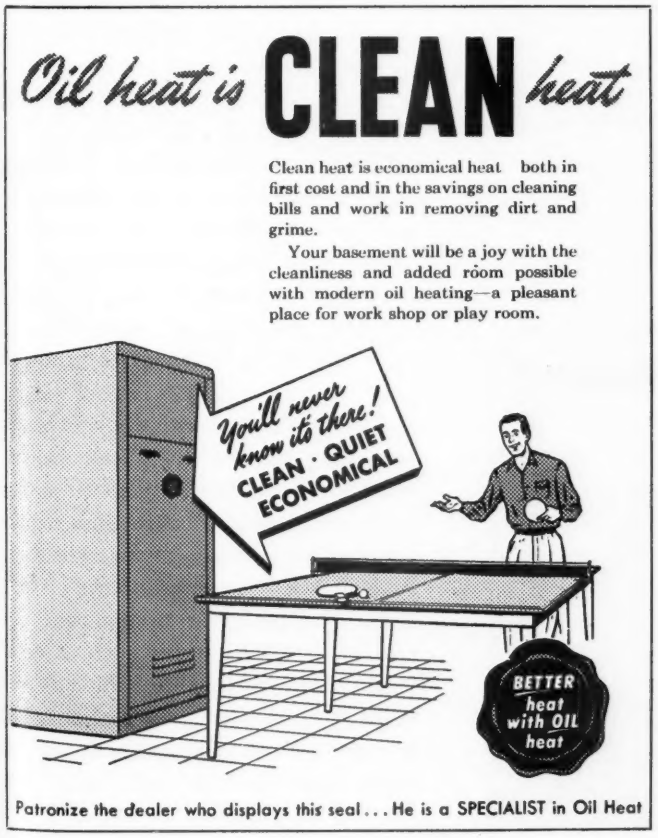
Point of sale—Window decals for use of dealers, and a larger version of the decal for truck signs. The decal was in the form of a large facsimile of the seal. The seal was an integrating factor in the entire campaign, appearing on all outdoor boards, in newspaper ads, etc. The body of the seal is a brilliant red, overlaid with the words Better Heat with Oil Heat. The words "better" and "oil" are in clear yellow; the remainder in white.

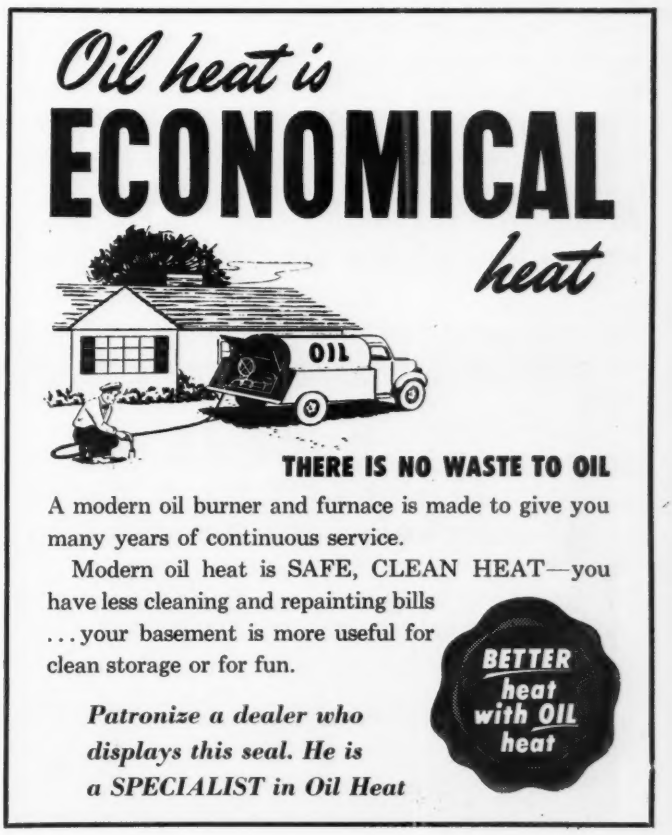
together through the preparation and use of two direct mail pieces, the "Oil Heat News." This was a four page slick paper "chatty" type of booklet carrying editorial comment on oilheating items of interest, and suggestion and helpful household hints. It was designed to be mailed by the dealer to his customers and prospects either as an envelope stuffer or as a self-mailing piece.

The theme and copy used for all parts of the program were institutional in character by choice and did not attempt to fight any battle of fuels as such. This we feel is essentially sound in the light of the actual competitive situation existing at present. However,

Oil heat is
DEPENDABLE
heat
OIL
• There are plenty of Oil Reserves
• Major Oil Companies have large local storage capacity
• You have your own home storage tanks
• Modern burners and furnaces give automatic heat
• You can choose your own Oil Dealer
Patronize the dealer who displays this seal. He is a SPECIALIST in Oil Heat.
BETTER heat with OIL heat

Oil heat is
COMFORTABLE
heat
MODERN OIL HEAT IS SAFE, EVEN HEAT
No flare-up of heat or shivery chill . . . just smooth, uniform warmth, easily regulated to suit your manner of living. Oil heat will bring out the best in your heating system whether it be warm air or hot water.
Patronize a dealer who displays this seal. He is a SPECIALIST in Oil Heat
BETTER heat with OIL heat


Oil heat is CLEAN heat
Clean heat is economical heat both in first cost and in the savings on cleaning bills and work in removing dirt and grime.
Your basement will be a joy with the cleanliness and added room possible with modern oil heating—a pleasant place for work shop or play room.
You'll never know it's there!
CLEAN · QUIET
ECONOMICAL
BETTER heat with OIL heat
Patronize the dealer who displays this seal . . . He is a SPECIALIST in Oil Heat


Oil heat is
ECONOMICAL
heat
OIL
THERE IS NO WASTE TO OIL
A modern oil burner and furnace is made to give you many years of continuous service.
Modern oil heat is SAFE, CLEAN HEAT—you have less cleaning and repainting bills . . . your basement is more useful for clean storage or for fun.
Patronize a dealer who displays this seal. He is a SPECIALIST in Oil Heat
BETTER heat with OIL heat

we are mindful of the fact that time is extremely short in which to adequately inform our customers of the obvious advantages of oil heat.

During this past year some forty-five thousand dollars were contributed by dealers throughout this state, and the balance of funds was obtained from other interested groups. Of the total funds received, approximately sixty-five thousand dollars, this first year's program will use between 55 and 60 thousand, leaving a small balance as we go into the second year of the plan.

All contracts were based originally on a three year program as a minimum. Our feeling is that a continuous program from now on may be the only means available to the dealers to counteract the tremendous free publicity the beginning of a natural gas pipeline is sure to bring. We know that will happen. We have already experienced reams of such publicity on the "off-again on-again" status of the present paneling pipeline applications. One thoughtful dealer in equipment last year expressed this underlying threat to our business by pointing out that we had already heard comments from potential customers to the effect they wanted to "wait and see." As he poignantly added "Hell man, we've got gas competition now!"

The scope of our present and continuing program is designed to sell Oil Heat today. We realize that the industry must also do a better job in making our present customers satisfied. We must see that every installation, every service job, every delivery of oil not only adequately takes care of the customers, but insures his heating comfort and satisfaction. Oil Heat is clean, it's comfortable, it's economical, it's safe as long as the industry makes it that way! But many of the dealers who have been coasting had better wake up to the necessity of putting their shoulder to the proverbial wheel—and putting their hands in their pockets for some support money to aid in convincing people when gas arrives that they have "Better Heat with Oil Heat!"

Any program of this nature to be successful must have the support of the leading dealers in each community, but more important the time, effort and personal expense incurred by these dealers in helping carry the responsibility of the program throughout the State in a large measure is the yardstick of a successful program.

The OHI of Washington was fortunate in having a "pioneer" Executive Committee of dynamic men put the program in work—Stan Crate, M. N. Vining and Fred Griffin at Seattle, Leon Boyle at Spokane and in the early months Chuck Holloway Jr. at Portland.

Each contributed much in time and personal expense—more than the average dealer realizes—to bring a finished, acceptable program to the industry. As the program was introduced the help of such dealers as Mark Dolliver and Herm Stelling of Tacoma, Bob Watt and John Hall of Seattle, Bill Cameron, Mt. Vernon, Ray Roberts and F. Croteau, Spokane, were invaluable in bringing it to the successful point achieved this year.

Our aim at this time is to keep the oil heat preference situation at the high level maintained at the present time, and to maintain a sustained interest in the industry program. Leo Thomas, the new president of the OHI of Washington, is now leading the industry in such an approach.

As this is being written, plans have been completed for the Pacific Coast Oil Heat Exposition, to be held as a public service feature at the same time that Pacific Coast dealers, from the San Francisco Bay area north to the U. S.-Canada border, are meeting in convention in Seattle.

The Exposition will be held in Seattle's Civic Auditorium, with a capacity of some 10,000 persons, and is one of many projects which will keep Oil Heat in the attention spotlight.

Reward good service Men

Keeping close Records of Performance, Detroit Dealer rewards the diligent

A LITTLE OVER TWO years ago there was a story in FUELOIL & OIL HEAT about a service department activity of Sherwood Brothers, Baltimore. It told of a method for establishing a unit value or a dollar value for each of the principal kinds of service calls, keeping records on each man and then grading them each month on their output of work. The report cards were sent to the homes of the men.

Around the country several dealers have since adopted systems patterned after the Sherwood, with minor variations and sometimes carried out with a different approach. Out in Detroit, Automatic Heating Corp., the Timken dealer, has adopted the general idea of Sherwood's plan and carried it a step farther. Instead of mailing the ratings to the man's home, they are posted on the board once a month where the men can see and study them, make bets if they like and treat the whole program as a sort of contest.

Not only that, but the men like the arrangement even though they know that any of them that are consistently low in performance will be dropped from the list. Two or three bad monthly ratings in a row will show that the man is not fitted for the job. The unions approve the arrangement. The men are well paid and they like the idea of getting public recognition when they do a good job. Men like cash of course, but even a high wage rate falls rather flat in shops where all the men are peas in a pod and no one takes time to label the experts.

Charles E. Feinberg heads Automatic Heating Corp. It's the largest and oldest of the burner and fueloil outfits in the city, and through the years has been one of the most successful in the country. Charlie has had lots of recognition in the industry. But this present job of improving service relations must be credited to Sidney Feinberg, a nephew.

It was not more than three years ago that labor relations in the service department of this company were bad. The editor visited the company about then and without going into detail there was certainly nothing harmonious between the service crew and the management. It was almost a dog and cat fight. To see the change now is almost incredible.

The first job in rebuilding good relations was to make the service department important. What man can ever be contented when he knows that he is looked on as a necessary nuisance, a situation so common in thinking of a service department.

Feinberg not only put in the system of recording the men's output and grading them publicly. He enlarged the department quarters . . . there's real floor space for the dispatchers, for the department managers, for the service lobby where the men get their instructions, see the score boards, and whatnot. Then in the basement the company has fitted up a service training room, with three complete heating units in operation, just like a school. And it is a school, for each Thursday evening the gang all stays in for training, the old timers as well as the novices.

The class demonstrations and lectures are made by a service or installation manager, or more often an equipment manufacturer sends his field man to explain the applications of his products. Any service problem that has been particularly troublesome may be good for more than one session.

To better visualize some of the results of the rating system for men look at the table, "Service Rating Results." Notice that this experimental period has covered two years ending in September 1951. The company looks after about 18,000 domestic burners so the total number of calls in the two years for all purposes, about 32,000, averages under one call a year . . . quite a record.

Sidney Feinberg

The large work sheets from which the figures are taken show the performance record on all points of each of 21 service men now employed, plus a half dozen others no longer there but who worked some during the period.

Look at the first line. There were 11,074 call-ins. On all calls of this type the best man of the present 21 averaged 1.12 hours, the slowest man 1.32 hours and the average of the 21 men was 1.22 hours. With that explanation the balance of the table should be clear.

The summer clean-ups appear high, are quite thorough. For a warm-air vacuum and tune up the company gets

Service Rating Results

Two years, October 1949 through September 1951

	Number of Calls	AVERAGE HOURS PER CALL *Best Man*	*Slowest*	*All Men*
Call-ins	11,074	1.12	1.32	1.22
Repeats on Call-ins	813	.58	1.15	1.06
Warranty Period Calls	4,023	1.11	1.35	1.23
Calls Under Contracts	6,067	1.07	1.22	1.14
Summer Clean-ups	4,054	3.02	4.08	3.30
Contract Voluntary Inspections	4,948	.30	.35	.33
New Installation Inspections	939	1.42	2.10	2.01
Total Calls all Purposes	31,954			
Repeats all Purposes	1,414			
Per Cent of Repeats		2.36%	5.69	4.43
Performance Points, based on $		5.85	4.35	5.29

$15 and for a boiler job $25 which includes blowing the tubes. Included in this price is one coupon good for an emergency service call any time during the year, value $4.50 if they need to use it. This makes it almost the same as a service contract when you notice how few total calls stack up in a year.

The company does have service contracts, about 1,800 of them. Most of these are on the older burners; they include parts. Actually, more than a third of them are on old Silent-Automatic burners put in before the days of Timken, or before 1932. And a lot of those old-timers still use gas pilots.

Sidney Feinberg has paid a lot of attention to the percentage of repeat calls. Notice the large difference in the repeat ratio between the best and slowest men. Then with the average figure of 4.43% repeats in mind, look at the table, "Reduction in Repeat Calls." Notice the great improvement in the two years—the ratio has almost dropped in half. That demonstrates real management and the men love it. No highly skilled service man enjoys having to call back on a job that he had reported all fixed up. The men and the boss make a game out of the number of repeat calls. If the average of the group for the month is, say 4%, each man puts into the pot a nickel for all of his repeats above that ratio and every man who beats the average gets a nickel a call. This isn't a bonus . . . too small for that . . . it's just sport. In the two years only about $500 has changed hands that way in the whole two dozen men.

Now back to the first table for the last line, "Performance Points." This is the real score, the one where the men are finally judged. This is expressed in dollars, although they are theoretical dollars. If you remember the Sherwood story it will come to you that the plan sets up an approximate

FREY

SERVICEMAN RATING

April 28, 1951

We recently called at your house to vacuum your boiler

Was the Serviceman courteous and respectful? VERY

Was he neat in his appearance? YES

Did he do the work to your satisfaction? ABSOLUTELY

Did he leave the basement clean? YES

Did he thank you for your patronage? YES

Remarks: He was especially conscientious and was congenial about answerin questions about the operation of the boiler

Your Name MRS MAX LEPLER

Your Address 3444 Edison Ave., Det., 6.

GENSLER SERVICEMAN RATING

Sept. 9 1951

We recently called at your house to Vacuum the burner

Was the Serviceman courteous and respectful? yes

Was he neat in his appearance? yes

Did he do the work to your satisfaction? yes

Did he leave the basement clean? Very clean

Did he thank you for your patronage? yes

Remarks: I intended cleaning the basement after he left but he left it so clean I didn't have to do anything.

Your Name Gertrude G. Davenport

Your Address 1218 W. Hancock

LAVALLEY SERVICEMAN RATING

July 2, 1951 195

We recently called at your house to Vacuum your furnace

Was the Serviceman courteous and respectful? very much so

Was he neat in his appearance? yes

Did he do the work to your satisfaction? yes

Did he leave the basement clean? yes

Did he thank you for your patronage? yes

Remarks: Your serviceman was excellent in his work You should be proud of such work.

Your Name Mrs. George A. Hende

Your Address 2304 Waverly Ave., Detroit 6

Reduction in Repeat Calls

		Per Cent of All Calls This Month	*Moving Average to Date*
1949	Oct.	6.9%	
	Nov.	9.4	8.1%
	Dec.	6.3	7.6
1950	Jan.	5.5	7.1
	Feb.	6.5	7.0
	Mar.	4.3	6.6
	Apr.	5.8	6.5
	May	4.6	6.3
	June	2.9	6.1
	July	4.2	6.0
	Aug.	3.9	5.8
	Sep.	4.5	5.7
	Oct.	4.0	5.5
	Nov.	3.1	5.2
	Dec.	3.7	5.1
1951	Jan.	2.7	4.9
	Feb.	4.5	4.8
	Mar.	3.1	4.8
	Apr.	2.1	4.7
	May	1.3	4.6
	June	2.3	4.5
	July	2.5	4.4
	Aug.	3.5	4.4
	Sep.	3.5	4.4

value for each of the general kinds of calls. This may be more or less than the actual billing from job to job, but it's about par for the course.

The work of each man is added up in dollars after calculating the par on each call, and this figure is divided by his hours worked. The average par billing per man hour for the group was about $5.29. Any man whose average is above that figure is in good standing. If he is below it for one month, that might be accidental but, even so, he watches his work a little closer. A second month below average would cause some concern and call for special attention and help from the service manager.

Only rarely is a man fired. If he's below par, everything is done to bring him up and it usually works. The men have fine team spirit. It's a union group of the better kind, their wages are all about the same and the game is to keep the whole gang up to scratch. They're smart enough to know that any company can afford high wages if they get high performance.

Feinberg takes the customers into the game, too. He lets them tell how they like the service men. After each annual clean-up job he sends a letter thanking the folks for the business. In this he encloses a return card on which the customer gives his impression of the man. Three of these are illustrated. Better than 99% of the cards are complimentary and when they come in they are posted on the bulletin board in the service department for a week. You can see how spirit is built by one company in a fine service crew.

Proved oil Reserves higher than ever before

THE NATION'S PROVED RESERVES of liquid petroleum and natural gas attained new highs in 1951 despite the record-breaking level at which they were produced. This is revealed in a joint report of the reserves committees of the American Petroleum Institute and the American Gas Association. Proved reserves of liquid petroleum and natural gas reached new all-time peaks as of last December 31; proved reserves of liquid petroleum rose from 29.5 billion barrels in 1950 to 32.2 billion barrels in 1951, a net increase of 2.7 billion barrels; proved reserves of natural gas went from 185.6 trillion cubic feet in 1950 to 193.8 trillion cubic feet in 1951, a net increase of 8.2 trillion cubic feet.

The net increase of 2.7 billion barrels in proved reserves of liquid petroleum is the greatest one-year addition in history and the net increase of 8.2 trillion cubic feet in natural gas reserves is the second largest of all time. Both were achieved in the face of record-breaking production of 2.5 billion barrels of liquid petroleum and 8.0 trillion cubic feet of natural gas in 1951.

In round figures this means that for every barrel of oil or cubic foot of natural gas withdrawn from the ground last year, there was found or developed two new barrels of oil or two new cubic feet of natural gas, one of which compensated for the production, the other going into net reserves. Also for the first time, in 1951 the total of liquid petroleum supplies developed exceeded 5 billion barrels.

Drilling activity boomed correspondingly at record-breaking levels. An estimated 44,500 wells were drilled and 26,500 were productive of oil or gas or both.

Of the 2.7 billion barrel net increase in liquid petroleum reserves, 2.2 billion barrels represented crude oil and 457 billion barrels represented natural gas liquids. Proved reserves of crude oil only are estimated at 27.5 billion barrels and natural gas liquids at 4.7 billion barrels.

The joint API-AGA report covers new discoveries, revisions of previous estimates and estimations of known pools. Proved reserves apply only to those whose location and extent have been proved and measured and they do not include any estimate of oil or gas which may underlie vast untested acreage in the country which appears favorable to accumulation of oil or gas.

The accompanying table shows estimated proved reserves of liquid hydrocarbons in the oil-producing states.

ESTIMATED PROVED RESERVES OF LIQUID HYDROCARBONS IN THE UNITED STATES

(Barrels of 42 U. S. Gallons)

	Proved Reserves as of December 31, 1950	*Production During 1951*	*Proved Reserves as of December 31, 1951*
Alabama(a)	5,396,000	1,031,000	7,860,000
Arkansas	394,647,000	29,908,000	387,508,000
California*	4,096,949,000	384,036,000	4,090,186,000
Colorado	352,450,000	28,291,000	337,088,000
Illinois	590,477,000	65,516,000	670,907,000
Indiana	57,524,000	10,654,000	50,816,000
Kansas	895,765,000	118,419,000	951,515,000
Kentucky	67,798,000	12,266,000	69,027,000
Louisiana*	2,828,649,000	254,345,000	2,969,554,000
Michigan	79,735,000	14,149,000	65,122,000
Mississippi	441,602,000	40,191,000	437,677,000
Montana	114,819,000	9,399,000	111,759,000
Nebraska	9,935,000	2,886,000	18,504,000
New Mexico	685,879,000	61,794,000	742,259,000
New York(a)	58,808,000	4,247,000	57,061,000
Ohio	28,952,000	3,224,000	28,146,000
Oklahoma	1,676,816,000	210,937,000	1,787,582,000
Pennsylvania	108,959,000	11,572,000	97,565,000
Texas*	16,077,681,000	1,136,473,000	18,192,305,000
Utah	21,823,000	1,351,000	29,744,000
West Virginia	48,018,000	8,882,000	62,683,000
Wyoming	890,003,000	71,141,000	1,019,326,000
Miscellaneous(b)	3,376,000	661,000	8,439,000
Total United States	29,536,061,000	2,481,373,000	32,192,633,000

*Includes off-shore reserves.

(a) Crude oil only.

(b) Includes Alabama natural gas liquids; Missouri, Tennessee and Virginia crude; Florida and North Dakota crude and natural gas liquids.

They're not like Nuts and Bolts!

Function of Nozzle in improving burner Performance points up Need for standard Ratings

by

Stanley C. Paterson*

ONE DAY A WHILE AGO, I got a call in my office from a dealer who claimed that he had one of our burners and was unable to get a good fire from it. Since the burner was equipped with a high efficiency combustion head, a nozzle of definite type and spray angle is necessary. I asked him if he was using an 80° hollow cone nozzle as we required. He said he was most careful to make sure that he was. Next, I asked him who made the nozzle he had in the burner. When he told me the company name, I knew the trouble. The nozzle he was using was not the one specified for the burner. True it bore the same rating as the one we would ordinarily use and was made by a well-known and high-grade company. However, it would not work.

This little story is significant as the new high efficiency combustion heads must have nozzles which have very specific performance characteristics if they are to operate properly. Variation in nozzle performance becomes more obvious now that spray patterns mean something. There was a time when it didn't make much difference what kind of a nozzle you used. The oilburner was so poorly designed and the standards were so low that as long as you produced a fire, that was all that was necessary. The high cost of oil, competition from other fuels, and the general awakening of the public have all gone to make the industry efficiency conscious.

So perhaps you have gone on a job and found that you could not get a good fire with some nozzle just because it happened to be made by some other company than you usually use even if it had the same rating. Perhaps you have noticed that some makes of nozzles give larger or smaller fires than the same rated nozzles made by another company. Yes, there is no question but performance differs considerably between various nozzle manufacturers' products.

Last year the Socony-Vacuum Oil Company tested over 400 nozzles and reported that only 54% of the group delivered within .10 gph of their rating. Naturally, as an oilburner manufacturer we were particularly interested in the problem so we decided to perform a test to see if we could discover some of the answers. We selected five companies who in our estimation were the leaders in the oilburner nozzle field. We obtained two nozzles made by each company which we believed to be representative samples of their production. All rating marks and other identification were removed from the ten nozzles and the set was sent to each manufacturer in turn with a request for them to rate the nozzles as to rate of flow, spray angle, and spray type.

Here I should like to acknowledge my thanks to the four companies who were most cooperative in the test. The fifth company, unfortunately, found it impossible to cooperate with us for one reason or other so all the data below is on the four remaining companies. However, the results are so conclusive that I feel sure no further data is needed to prove my case.

Below you will find the results of the experiment in Tables I, II, III, IV, V and VI.

If we look at Table I and II we will see the data as to oil delivery tabulated. Each of the companies was requested to record the actual rate of flow of the test nozzles as measured in their test set-up. The rating stamped on a nozzle is not necessarily its actual output. Most nozzle companies test their nozzles against a set of master nozzles whose output has been very carefully determined. If a given nozzle comes within 5% of the output obtained from these master nozzles, it is considered acceptable; i.e., if the master nozzle is for 1.00 gph, for example, and the production nozzle delivers anywhere from .95-1.05 gph, it is stamped 1.00 gph. For most purposes this 5% allowance is adequate.

Since nozzle companies use a good grade flow meter, we should expect to find their ratings as to output to agree fairly well. However if we look at Table I we can readily see that manufacturers do not agree consistently on the ratings. In fact, Table VI tells us that the average agreement on nozzle output between the four companies within .05 gph was only 56%. Company C and D were the best agreeing on eight out of ten nozzles while companies A & B agreed on only two.

Table I

Table of actual output of test nozzles as measured by different nozzle manufacturers

Nozzle No.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Co. A	**.95**	**1.21**	1.11	1.33	1.11	1.19	1.20	1.28	1.38	—
B	1.02	1.34	**1.18**	**1.32**	1.20	1.36	1.30	1.37	1.38	1.37
C	.96	1.29	1.16	1.33	**1.19**	**1.35**	1.23	1.33	1.46	1.39
D	.94	1.27	1.14	1.36	1.16	1.31	**1.18**	**1.28**	1.40	1.31
Difference in Output	.08	.13	.07	.04	.09	.17	.12	.09	.08	.08
% Differ. betw. Co.	7.8	9.7	5.9	2.9	7.5	12.5	9.25	6.6	5.5	5.7

Table II

Table of output ratings given test nozzles by different nozzle manufacturers

Nozzle No.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Co. A	**1.00**	**1.20**	1.10	1.35	1.10	1.20	1.20	1.25	1.35	—
B	1.00	1.35	**1.20**	**1.35**	1.20	1.35	1.35	1.35	1.35	1.35
C	1.00	1.25	1.20	1.35	**1.25**	**1.35**	1.25	1.35	1.50	1.35
D	1.00	1.25	1.20	1.35	1.20	1.35	**1.25**	**1.35**	1.50	1.35
Original Rating	1.00	1.35	1.20	1.35	1.25	1.35	1.25	1.35	1.35	1.35
Differ. in Rtg.	—	.15	.10	—	.15	.15	.15	.10	.15	—

Note: The nozzle data in bold-face type indicate the nozzles made by the company reporting.

*Proprietor, Waltham Oil Burner Co., East Boston 28, Mass.

Looking at the actual ratings themselves in Table I, we find differences in ratings from .04 gph to as high as .17 gph. (There is a possibility that Nozzle #6 was partially clogged when tested by Company A thus giving such a low reading; however there were two other nozzles where there was a difference of .12 and .13 gph which is almost as bad). On a percentage basis we find the differences average about 7.3% with a low of 2.9% and a high of 12.5%.

Of course nozzles are not stamped with their exact output but some standard output which is within 5% of the actual output. Therefore, we asked the companies to tell us what rating they would stamp on the nozzle itself. This information will be found in Table II. All four companies could agree on the stamped rating of only three of the nozzles. If we again look at Table VI, we find that while C & D agreed on every nozzle but one, the other companies were not nearly as close making an average of only 48%. Apparently Company A did not agree with any of the other companies showing agreements of 30%, 20%, and 20%.

Naturally we would expect some variation in test ratings due to differences in test procedure. Since a hundredth of a gallon per hour is a relatively small graduation on the meters used, some judgment must be exercised by the tester in reading it on a production basis. There is also some error to be expected in the flow meters themselves and certainly there is probably some disagreement between the meters used by various companies. Beyond the purely mechanical errors there is one important factor of error that must be taken into account. That is the viscosity or thickness of the oil used to test the nozzles. As has been shown by various articles that have appeared from time to time in this magazine, the output of a nozzle varies directly with the viscosity of the oil used (i.e., as the thickness of the oil increases, the output increases as well up to a point). This means it would be impossible for nozzle manufacturers to get comparable output ratings if the testing oil varied in viscosity.

A glance at Table V will show that while the thickness of the testing oil used by Companies A and C is relatively the same, the other two companies use a somewhat thicker testing oil. This means we would expect to find the ratings of Company B and D to be somewhat higher than the other two (theoretically they should be 3% or 4% greater). Examining Table I again, we find that while as we expect B rendered the greatest output most of the time, this trend is not shown with Company D.

This leads us to assume that there must be other differences in Company D's test technique which accounts for the discrepancy. Thus we have found that there is not too close an agreement between companies as to the rated delivery of their nozzles which on the face of it would seem a serious problem. However, when we realize that the rated output of any nozzle does not come anywhere near being the actual output in a burner under fire, the average difference of some 7% does not seem so serious. This is true because the fueloil in the nozzle while the burner is operating is never at the same temperature as that in the manufacturer's test bench. It will vary from burner to burner and probably will vary on different installations of the same burner. This variation in oil temperature will, of course, affect the output of the nozzle. The tests reported by the Socony-Vacuum Oil Co. laboratory showed a reduction in fuel output of up to .10 gph during operation of the burner from its original rating depending on the temperatures encountered in operation.

This means that no matter how careful the nozzle manufacturer is, there still will be a difference between rated output and actual output up to 10%. Of course, I must admit that disagreement between the rated output of various companies even complicates the problem still further and increases the total error from 10% to probably nearer 20%-25% in small house sizes (i.e., 1.00-1.50 gph).

This brings me directly to my pet peeve. If as I have just shown, the error to be found in a domestic nozzle in the 1.00-1.50 gph range can be as large as .25 gph, what sense does it make under the present state of non-standardized rating to mark nozzles with as close graduations as 1.00, 1.20, 1.25, 1.35, 1.50 gph?

Is it any wonder therefore that service men are confused when they put a nozzle marked 1.25 gph of Company B in an XYZ burner which operates at a low nozzle temperature and find the fire looks (and actually is) bigger than a 1.50 gph nozzle of Company A in a PDQ burner which operates at a high nozzle temperature?

How much the nozzle manufacturers can do to remedy this confusing picture remains to be seen. Certainly first off they can set up standards as to the

We have Moved

Since April 1 FUELOIL & OIL HEAT has been located in new offices on the 11th floor at 2 West 45th St., New York 36, N. Y. Telephone numbers are MUrray Hill 2-4786, 2-4787 and 2-4788.

Table III
Rating of Nozzle Angle in Degrees

Nozzle No.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Co. A	90	90	90+	90	90	90+	80	80	90+	—
B	90	80	80	80	80–5	80–5	70	80	80	80
C	84	85	86	85	84	85	85	85	85	82
D	90	92	85	80	92	95	80	80	83	80
Original Rating	90	90	80	80	80	80	80	80	80	80
Difference in Rate	6	7	5	5	12	15	15	5	7	2

Table IV
Rating of Spray Type

Nozzle No.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
		Slight	Slight	Slight						
Co. A	S	H	H	H	H	H	H	H	H	—
B	H	S	S	S	S	S	S	S	S	S
		Rel.	Rel.		Rel.				Rel.	Rel.
C	?	H	S	S	H	H	H	H	S	S
										Semi
D	H	H	H	S	S	H	H	H	H	H
Original Rating	S	H	S	S	H	H	H	H	H	H
Number Agreeing	2	3	2	3	2	3	3	3	3	2

methods of measuring output, viscosities and temperatures of oils, etc. Perhaps studies might be made to arrive at an allowance which could be made to compensate for changes in conditions while under fire similar to what is made for the differences in West and East coast oils. All in all the problem may be somewhat difficult, but I do not think it is insoluble. At least some thought and effort should be put into its solution.

Each of the companies was requested to record the spray angle of the nozzle. Spray angle is generally measured by setting a black plate behind the spray with the spray angles marked on it. It is then up to the judgment of the operator as to just what angle the spray is. The industry considers plus or minus 5° to be a satisfactory tolerance. The spray angle of the nozzle is affected by the viscosity of the oil and thus by its temperature in much the same manner as is the output. Generally, the higher the viscosity, the narrower will be the spray. However, no absolute rule will hold as the relationship of spray angle and viscosity depends on the nozzle design. This was shown in a study by the Shell Products Development Laboratory several years ago. As might be expected, therefore, the ratings for Company B, except for two cases, were the lowest as according to our viscosity data Company B had the highest viscosity test oil. The spray angle of Company D should be low as well on the same basis but the same trend was not noticed here for some unknown reason.

Table V

Testing Oil Data

	Pressure	*Viscosity*
Company A	100	34.9
B	100	39
C	100	35.1
D	100	36

As an overall picture Table III records a difference between companies of as much as 15° with an average of 8°. In an oilburner without a definite air pattern, a variation of 15° in nozzle angle would not be a serious matter. However, the trend in the industry is toward improving the efficiency of operation of oilburners. Hand in hand with improved efficiency goes control of the air pattern. In order to produce 12%-14% CO_2 which fortunately is the aim of most good oilburners today, the air and oil must be carefully metered so that a minimum of excess air is used. This understandably requires closer tolerances on oil spray angles than ever before. Any variation from the required angle will affect the firing of such a burner to a greater or lesser degree. While 5° may not affect the CO_2 more than 2% or so, 10°-15° may destroy the flame pattern entirely. Differences of this magnitude appear definitely possible from this test and are subsequently a serious problem to the service man.

Table VI

Per Cent Agreement Between Companies

	Actual Nozzle Output within .05 gph.	*Nozzle Rating*	*Nozzle Angle within 5°*	*Spray Type*
A with B	20	30	20	0
A with C	50	20	70	50
A with D	70	20	70	60
B with C	70	60	70	40
B with D	50	70	70	30
C with D	80	90	50	50
Average %	56	48	58	38

Spray Type

The companies were requested to note the type of spray of the nozzle; i.e., hollow cone or solid cone spray. The result of this part of the test is in Table IV. Spray type is generally measured by putting a black plate in the spray and observing the pattern produced on the plate by the condensing spray. One might assume that such a test would produce uniform results; however, as can be seen from Table III such was definitely not the case. In fact, there was not complete agreement between any of the manufacturers. Nozzle 4 came the closest to agreement but all in all the majority of the tests show marked discrepancy.

This interesting divergence of opinion is caused by two factors—one, the unusual spray patterns of some makes of nozzles; and secondly, the apparent lack of agreement between companies as to the measuring techniques. Apparently there is no agreement as to how far away from the nozzle the type of spray should be determined. With two of the companies their solid cone spray nozzle is hollow for the first few inches of spray and then becomes solid. Of course if the spray is measured in the hollow part, the nozzle will be rated hollow; and likewise if the nozzle is measured in the solid part, it will be rated solid. It is interesting to note that the two companies A and B whose solid cone nozzles are this type, do not agree on the rating of a single nozzle.

All in all this discrepancy in spray type is a serious matter. Particularly so because any oilburner which has a definite flame pattern also requires a nozzle with a particular spray type. For instance, let us assume a burner manufacturer specifies the 90° solid cone nozzle of Company A as being the best to use in his burner. A serviceman in the field finds it necessary to change the nozzle and for one reason or other cannot obtain one of Company A's nozzles but gets one made by Company B instead. Naturally he will buy a 90° solid cone spray nozzle. However, this nozzle would be an 80° hollow cone by Company A's standards, and of course it has a completely improper spray pattern for the burner. Now what is the serviceman going to do? Why he is going to say that Company B's nozzles are "no d - - - good." Result—Company B who may make perfectly good nozzles has lost a potential customer and at the same time has created a missionary of ill will only because his rating system did not agree with Company A.

Infinite Variety

It is of course possible by variations in design to produce an infinite variety of spray patterns, which leads us to the great moral to be drawn from this article—Nozzles are not like "nuts and bolts." You cannot expect the same rated nozzle of one manufacturer to produce the same result as some other make. Unfortunately, however, it has been my experience that the great majority of the trade believe that nozzles are like "nuts and bolts." This is mainly true because while there have been

very laudable attempts to educate the trade as to the performance characteristics of nozzles in general, no one has spread the word that you cannot mix nozzles any more than you can mix oil and water.

What does this mean? It simply means that you as an oilburner serviceman must, if you are to produce the results the public has a right to expect and the results competitive fuels are forcing you to get, determine what make of nozzle operates the best on the various oilburners you service and stick to it. This information is usually obtainable from the burner manufacturer. If not, it will be necessary for you to experiment until you find out for yourself. If the nozzle on a particular burner needs to be changed you must replace it with the same make. As we have shown, it is not enough merely to replace it with *any* nozzle with the same rating on it.

Perhaps those dealers who service literally dozens of different makes of burners may feel this is too much to ask. Perhaps they might say "Why can't nozzles be made like 'nuts and bolts'?" Of course there is no answer to the question at this time. It would be necessary for a great deal of study to be made to determine exactly what types of nozzles were necessary. Standards would have to be set up as to testing and grading. Perhaps this is impossible. Surely at the present time no facilities exist to supply this system which is so sorely needed.

We have Competition

At this time competitive pressure is being put on the oilburner industry by other types of fuels in a wider and wider area. In some places oil has held its own; in other places, oil has fallen by the wayside. Surely this is a time when every part of the industry should be doing its utmost to make oilburner service simpler, more economical, and above all, cheaper for the consumer. It seems to me that the time has come for the nozzle industry to sit down and work out these problems. While it may not be possible for nozzles to be made as "nuts and bolts" I think it is obvious from this investigation that some sort of standardization would certainly help.

Brothers Elmer and A. J. Lassus, Jr.

The Camera visits a Midwest fueloil Marketer

STOPPING OVER one day last fall at Fort Wayne, Indiana, the editor recalled that this city is the home of Lassus Brothers, a quite successful pair in the fueloil business. Spending a few hours with A. J. Lassus, Jr., and Elmer Lassus, his brother, brought an interesting insight into a type of operation found more often in the Central States than in other sections of the country.

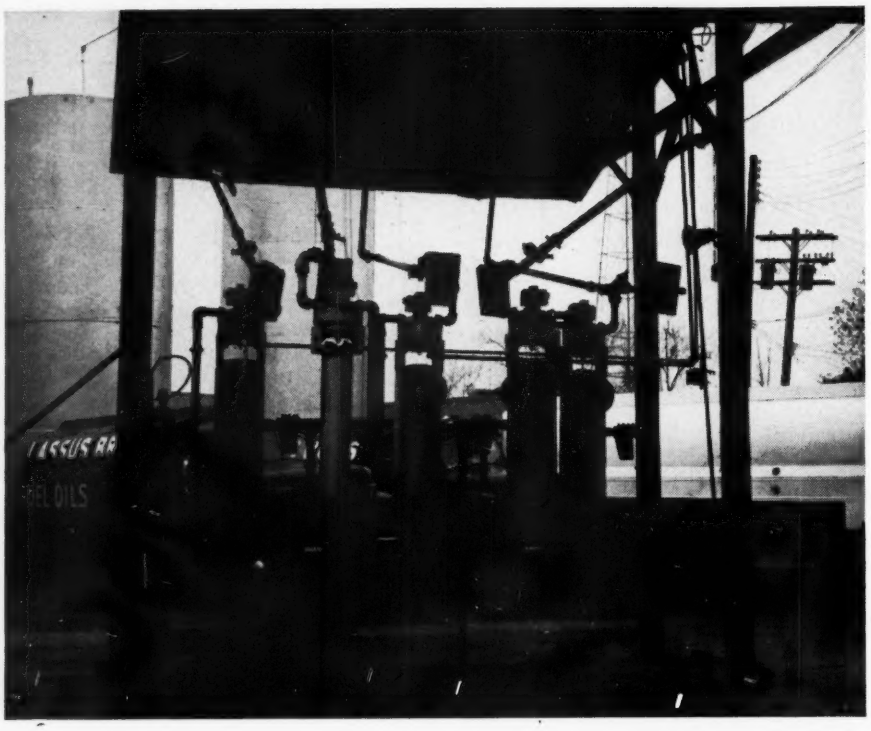
The company was known by reputation to be successful over a number of years, a fact reflected by operating figures sent in by Lassus at the time of FUELOIL & OIL HEAT'S annual market summaries. Doing above five million gallons consistently in a town of 80,000, most of it is fueloil, although gasoline is sold at one station located at the bulk plant.

You get the impression in an afternoon with the Lassus brothers that fueloil marketing is a simple business. A search for unique operating methods, novel merchandising activities, was fruitless. There was almost nothing in their way of handling business that could be isolated and glorified for the benefit of the industry at large. They take orders, deliver the oil and collect for it, with few frills.

You conclude that their profitable operation results from keeping overhead moderate with limited personnel and an extraordinary selling job by the brothers Lassus. The gasoline business was started by their father in 1924; the boys came in three years later and so did fueloil. So for 28 years they have been going after fueloil gallonage.

Active in Fort Wayne's civic organizations, church affairs and public doings generally, they know a great many people in a personal way. Very friendly types, folks like to do business with them. Their business philosophy . . . they probably would deny having one . . . stacks up about like this: instead of struggling for the last point of saving in operating costs we are better off concentrating on selling . . . good selling can earn more dollars than elaborate internal operations could save.

Naturally the company has the customary modern facilities like degree-day operation, running its own over-the-road transports to bring in products, and using a new Burroughs accounting machine that is built specially for fueloil marketing. This machine at one operation makes a customer statement, a ledger card, and keeps the degree-day card posted. It carries run-



ning totals on cash, receivables and daily gallons sold.

On the question of truck costs, delivery costs and the like, there were no formal statements but the brothers keep a pretty good mental picture of what goes on. For example, they have an unusual check-up method for the trucks. Gasoline for operating the fuel-oil trucks is loaded of course at the company's own station. The station tickets are stuck up on a peg board, one peg for each truck. At the end of the month the total gasoline used by each truck is compared with the total fueloil delivered. This is of course a rough check on the truck's activities. A truck with a bad record is studied for reasons. These are man-to-man studies. Knowing of these check-ups the drivers do their best to make the most effective use of their mileage. For their particular market conditions the brothers have found the greatest economy in a 1,600 gallon size truck with a light chassis, so they are concentrating their new purchases in this range.

Helping the Lassus brothers in the management are Mrs. Lucille Mayfield, office manager, Denny Dennis and Byron Collier, dispatchers, and Donald Null, service manager for oilburners.

The photographs show a loading rack with air eliminators on the platform and a shot in the bulkplant yard. The Cadillac in the foreground was not borrowed for the picture.

NPA may raise Quotas for oilburner Materials

THE NATIONAL PRODUCTION AUTHORITY is expected to be ready to grant oilburner manufacturers their request to increase allotments of critical materials for oilburners during the last half of 1952.

The burner manufacturers pointed out that the second half of any year, rather than the present base period (first six months of 1950) more accurately reflects the seasonality of the industry. They also stated that the average production level of the industry in the first six months of 1950 was the lowest in many years. The committee contended that only one-third of the industry's production occurs in the first six months of the year.

NPA has restored oilburner parts to the Controlled Materials Plan "B" products list. They were omitted from the first-quarter list inadvertently, the agency reported, thus automatically coming onto the "A" list. A manufacturer ordering a component on the "A" list must surrender the required materials from his own allotment to the component maker.

The burner manufacturer committee heard NPA spokesmen report on supplies of controlled materials and on the operation of the CMP. Some types of steel, noticeably hot rolled sheet for small fuel tanks, are in better supply. The outlook for a fair-to-good supply in the second quarter is optimistic. The supply of heavy plate sizes is still tight, but the situation should ease as defense needs and industrial expansion goals are met. Copper will remain in short supply, although the Government and private industry are doing everything possible to increase supplies. Prospects of additional aluminum are reported brighter.

Contrary to reports, the NPA said, controls on sheet steel will not be removed at the present time.

Final Estimates 1951 Oilburners

by
Robert Gray

NEW YORK BECAME the first state in oilheating history to pass the million mark in number of oilburners in operation, according to the revised final estimates of 1951 installations. And the Midwest again showed the greatest percentage gains for any large area.

The number of installations of domestic oilburners and units during the year now appear to have been 675,060, or some two percent less than the preliminary estimate of 692,202 published in the January issue. This is the first time that the preliminary estimate has been higher than the final figure.

To arrive at the installation total, this was the calculation:

Factory Shipments	693,334
Less Exports of	21,541
Net U. S. Shipments	671,793
Dealer Stocks declined	3,267
Indicated Installations	675,060

The export figures were divided by months in this way:

Jan.	2324	May	2138	Sept.	2437
Feb.	1431	June	1681	Oct.	1887
Mar.	2532	July	1487	Nov.	1188
Apr.	1202	Aug.	1828	Dec.	1406

During the year the oil industry gained 532,422 new customers for fuel. This figure is represented in the table by the new homes and the conversions from other fuels, less the losses to other fuels. It is interesting to notice that while we lost 50,830 customers to gas, electricity and coal during the year, we took 328,079 accounts from them.

The net gain in number of oilheating users during the year was 10.3% for the nation. Only the Midwest with 13.9% was higher than the national average. The other sectional gains were: New England 8.7%; Mid-Atlantic 10.1%; South Atlantic 9.0%; South Central 7.6%; Mountain 8.9%; Pacific 5.9%. The significant point about the Midwest's strong showing is that competitive fuels in that area are cheaper than in any other principal oilheating region. Agricultural prosperity is no doubt responsible.

The distribution of the total number of oilburners in use on the first of the year was: New England 17.4%; Mid-Atlantic 41.6%; South Atlantic 4.8%; Midwest 25.1%; South Central 1.3%; Mountain 1.3%; Pacific 8.5%.

Thinking in terms of oil demand, the whole East Coast, or PAD District I, accounts for 63.8% of the nation's requirements. This fuel is either refined at the Gulf and moved in tankers or it's refined at tidewater points strung from Pennsylvania to Massachusetts.

Distillate Oilburner Installations By States, 1951

	Burners In Use 1/1/51	INSTALLATIONS				*Lost to Other Fuels*	*Burners In Use 1/1/52*
		New Homes	*Replacements*	*Conversions*	*Total*		
Maine	63,495	962	1,451	4,209	6,622	188	68,478
New Hampshire	61,199	1,146	1,727	5,014	7,887	224	67,135
Vermont	17,365	339	510	1,481	2,330	66	19,119
Massachusetts	485,747	7,874	11,869	34,445	54,188	1,536	526,530
Rhode Island	65,226	1,255	1,892	5,489	8,636	245	71,725
Connecticut	220,000	3,746	5,647	16,388	25,781	731	239,403
NEW ENGLAND	913,032	15,322	23,096	67,026	105,444	2,990	992,390
New York	940,302	35,227	20,276	62,159	117,662	5,937	1,031,751
New Jersey	472,022	20,841	11,996	36,775	69,612	3,513	526,125
Pennsylvania	437,500	17,941	10,326	31,657	59,924	3,024	487,074
Delaware	33,648	1,352	777	2,379	4,508	228	37,151
Maryland	213,516	6,363	3,662	11,228	21,253	1,072	230,035
Dist. of Columbia	60,290	2,112	1,216	3,728	7,056	356	65,774
MID-ATLANTIC	2,157,278	83,836	48,253	147,926	280,015	14,130	2,374,910
Virginia	121,102	5,271	1,425	3,720	10,416	629	129,464
West Virginia	1,667	294	79	208	581	35	2,134
North Carolina	58,096	5,196	1,405	3,666	10,267	620	66,338
South Carolina	17,682	1,218	329	859	2,406	145	19,614
Georgia	11,173	965	261	681	1,907	115	12,704
Florida	41,073	1,268	343	894	2,505	153	43,082
SOUTH ATLANTIC	250,793	14,212	3,842	10,028	28,082	1,697	273,336
Michigan	234,415	19,192	1,588	14,051	34,831	4,300	263,358
Ohio	94,027	12,293	1,017	9,000	22,310	2,754	112,566
Indiana	85,513	9,063	750	6,636	16,449	2,031	99,181
Illinois	236,375	27,850	2,304	20,391	50,545	6,240	278,376
Wisconsin	167,540	15,870	1,313	11,619	28,802	3,556	191,473
Minnesota	183,460	12,200	1,009	8,933	22,142	2,734	201,859
Iowa	82,214	7,825	647	5,729	14,201	1,753	94,015
Missouri	74,779	5,267	436	3,856	9,559	1,182	82,720
Kansas	8,426	717	59	526	1,302	160	9,509
Nebraska	42,786	2,373	196	1,738	4,307	532	46,365
South Dakota	23,592	1,482	126	1,081	2,689	332	25,823
North Dakota	24,072	1,622	134	1,186	2,942	363	26,517
MIDWEST	1,257,199	115,754	9,579	84,746	210,079	25,937	1,431,762
Kentucky	7,606	893	241	630	1,764	125	9,004
Tennessee	12,172	933	252	658	1,843	130	13,633
Alabama	7,647	430	116	303	849	60	8,320
Mississippi	1,382	80	22	56	158	11	1,507
Arkansas	2,323	95	26	67	188	13	2,472
Louisiana	9,452	192	52	134	378	27	9,751
Oklahoma	1,688	127	34	89	250	18	1,886
Texas	28,201	667	181	473	1,321	93	29,248
SOUTH CENTRAL	70,471	3,417	924	2,410	6,751	477	75,821
Montana	6,408	520	140	368	1,028	95	7,201
Idaho	12,555	938	254	662	1,854	172	13,983
Wyoming	2,831	258	70	181	509	47	3,223
Colorado	10,079	510	138	361	1,009	94	10,856
Utah	9,224	835	226	589	1,650	153	10,495
Nevada	9,744	490	132	346	968	90	10,490
New Mexico	2,600	84	23	58	165	15	2,727
Arizona	13,250	260	70	183	513	48	13,645
MOUNTAIN STATES	66,691	3,895	1,053	2,748	7,696	714	72,620
Washington	166,855	9,193	2,483	6,473	18,149	239	182,282
Oregon	106,774	6,127	1,655	4,315	12,097	597	116,619
California	183,041	3,417	923	2,407	6,747	4,049	184,816
PACIFIC	456,670	18,737	5,061	13,195	36,993	4,885	483,717
UNITED STATES	5,172,134	255,173	91,808	328,079	675,060	50,830	5,704,556

Exam for Service Men

How would* YOU *make out, if required to take a written licensing Examination?

by
J. W. Schulz

IN MOST PARTS of this country, you can start right in servicing oilburners without first proving you are qualified for this and without breaking any laws. But in other parts of the country, emphasis has been placed on permitting only safe and sane oilburner servicing. In effect, the untrained and unqualified service man has been judged to be a hazard, for it's been recognized that such a man can do such unsafe things as arrange a burner for uncertain ignition, disconnect or short-circuit safety controls that he can't fix quickly, cripple fuses and overload devices, and leave heating boilers and hot water tanks in a condition to explode if-and-when excessive pressures develop in them.

Where municipalities place emphasis on safe and sane oilburner servicing, it's very likely that before being given a license to service burners you would have to take a written examination. Giving examinations to prospective service men generally is considered one good way to find out if they would be safe servicing oilburners.

All this is not to deny that there are weighty arguments against the licensing of service men, as well as strong arguments in favor of this. That's aside from our point here. Our point is: If you as a service man were forced to take a written oilburner examination, how would you make out?

You may be able to get a pretty good idea of the answer to that question by testing yourself with the help of the examination that follows.

This examination follows the pattern of an examination recently prepared by FUELOIL & OIL HEAT for use in a certain city which has just started issuing licenses to oilburner men. The pattern is the same, but the answers are different to avoid letting loose beforehand in that city the answers to its oilburner examination questions.

So you don't like examinations? Well, lots of men don't. But consider that in New Jersey, for example, you can't even get a license to drive your automobile without first passing a written examination!

The following examination is aimed primarily to indicate which men will use only safe and reasonably good methods in servicing oilburners. However, it does include a bit of protection for the oilburner owner against service practices that waste his money because of the service man's doing the wrong thing. That is, the examination considers it wrong for a service man to replace a fuel unit merely because the strainer in the fuel unit may need cleaning, and considers it wrong for a service man to be completely uninformed on proper draft, CO_2, stack temperature, firebox sizes, gph rates, etc.

The selection method of answering questions is used through this examination. No sentences must be formed to answer the questions properly, and no special words must come to the mind of the man taking the examination. The reason for this is that many men have had skimpy schooling (in actual instances, some of these men have not gone beyond the fourth grade of elementary school), yet are good at burner service work because they are naturally careful and thorough and have worked successfully at burners for years. Such men may do poorly in drawing up written answers to examination questions. By comparison, a college man or high school graduate who has soaked up oilburner knowledge from textbooks, but who knows nothing about on-the-job oilburner work, shows up too well at drawing up sentences to answer examination questions.

How would you like to have your burner serviced by a man who thinks 3,000° stack temperature is all right, or something like that?

We've done much work correlating examination marks to actual on-the-job ability of prospective service men. Here's the type of episode involved in this. Because he had practically swallowed several books on oilburners, this college graduate could draw up beautiful sentences as answers to oilburner examination questions. But then, taken out to an actual installation and told to switch nozzles, first he complained that the old nozzle was stuck because he could not get it out with his fingers only and without the help of a wrench. Next, he tightened the new nozzle only with his fingers, demonstrating that he believed no tool was needed to tighten it properly. Finally, he used an 18" pipe wrench on a ⅛" oil line fitting that dripped after he'd switched nozzles, and broke the fitting, of course. He'd read many textbooks, but none had told him that a nozzle needs to be tighter than finger tight, and none had told him not to use full strength on an 18" pipe wrench hooked to a ⅛" pipe fitting.

Don't get downhearted, because even if you make an outright guess you stand a one-out-of-four chance of being correct! On the other hand, try and be among the few who get 100% . . . if you think you are so smart!

Book larnin' is not ruled out entirely for practical service men. A little may do some good!

By the way, we have drawn up examinations for men who have studied oilburners in trade schools, colleges, special courses, etc., but the bases of these examinations are entirely different from the basis of the examination that follows. To find out if an unschooled man is safe servicing burners is one thing; to find out if a man's been learning what he's supposed to is decidedly different.

Instructions for taking the examination that follows:

1. Simply read each question in turn,

and check the answer you believe is correct. Either encircle the "A," "B," "C," or "D" printed before the possible answers, or note your answers on a separate sheet of paper in this fashion: "Question #1, A," "Question #2, D," etc.

2. If you do not find an answer which is precisely correct to your way of thinking, then mark as correct the listed possible answer that you think is most nearly correct.

3. Don't mark more than one answer as correct. Marking two or more answers as correct gives you zero for the question.

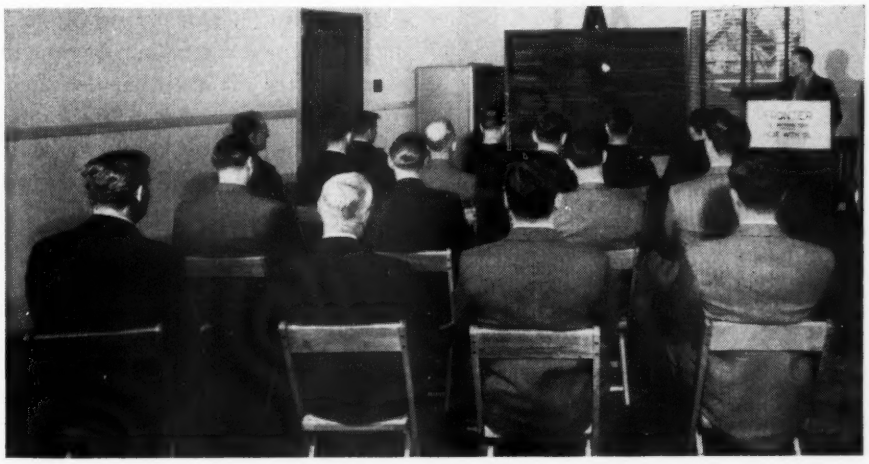
4. Change your answer after you decide on your first answer, if you like. But if you do this, strike out your first answer clearly, and label your final answer if necessary to avoid confusion.

5. Up to one hour's time is allowed to answer all questions. You should answer every question.

6. A mark lower than 76% fails. each correct answer scores 4%.

(Don't consider the examination as difficult because lower than 76% fails. Consider that merely by guessing answers, a man could expect a mark of 24% even though entirely ignorant of oilburners.)

The correct answers are given on p. 95 so that after taking the examination you can figure out your mark.



Domestic oilburner Examination

Question 1—An oilburner owner complains that in winter his burner starts and stops too often. It runs for six minutes, stays idle 15 to 25 minutes, then starts again. Which of the following items indicates what you might tell the owner?

A. Order fueloil, because you need it.

B. Burner motor may burn out because of excessive starting and stopping.

C. Such starting and stopping is all right; owner should not complain.

D. Stack control is defective.

Question 2—The spark tips of a gun type burner (where the spark is located) should be adjusted to be in the following location:

A. In the center of the oil flame.

B. Set the spark tips to give a spark one-inch long; this spark should be located entirely within the gun tube.

C. Set the spark tips for about a 3/16" spark gap; the tips should be close to the oil spray from the nozzle, but not in the spray.

D. The spark tips should be at least two inches clear of the oil spray from the nozzle.

Question 3—Which of the following items can cause fuses to blow?

A. Excessive stack temperature.

B. Short-circuit in low-voltage room thermostat or in low-voltage thermostat circuit.

C. Defective burner motor draws excessive current on starting.

D. Use of an oversize nozzle is overloading the fuel unit and motor of a pressure-atomizing, gun-type burner.

Question 4—Mark the one of the following items which comes closest to telling why pressure burners connected to outside tanks usually have return lines.

A. To avoid breakdowns caused by air-binding of pumps or fuel units.

B. To warm up outside tanks.

Consider carefully every one of the possible answers listed here. If some appear absurd to you, bear this in mind. When this examination was road-tested with the help of men now working at servicing oilburners, not one of these 100 possible answers was considered absurd by all of the men.

C. To avoid excessive nozzle pressure, which would result from failure to install a return line.

D. To permit using a small suction line; with no return line, a large suction line is needed.

Question 5—A new furnace-burner unit is fitted with a 1.0 gph nozzle, and breaks down often because the nozzle plugs. Which of the following steps might be used to end the nozzle-plugging trouble?

A. Put a few gallons of gasoline in the storage tank to thin the fueloil.

B. Replace the burner's fuel unit.

C. Switch to a 1.50 or 2.00 gph nozzle.

D. Install an oil filter in the oilburner feed line.

Question 6—Fueloil keeps dripping from the nozzle of a pressure burner while the burner is idle. Mark the one of the following items that could cause this trouble.

A. Oil pump gears are worn and loose.

B. Defective anti-syphon valve on an outside tank installation.

C. Leaky shut-off valve in fuel unit.

D. Burner is staying idle too long.

On the one hand, nobody we know is in favor of increased governmental control or bureaucracy, and the "fueloil installer" of New York (as the newspapers insisted on terming oilburner dealers) did see more than his share of grafters. On the other hand, there are those who insist that licensing of oilburner men is necessary in the interests of public safety, for without the need for a man to qualify himself as an oilburner expert any ignoramus can go into the business of servicing oilburners . . . and making them unsafe as he goes along.

Question 7—A forced-air, warm-air furnace in a bungalow has a high limit control to stop the burner when the furnace temperature is at its proper

maximum. You have to adjust this control. Which of these items indicates the proper adjustment for this high limit control?

A. Between 160°F. and 225°F.

B. Below 1,000 fpm air speed.

C. Either 110 or 220 volts.

D. No higher than 600°F.

Instructors of oilburner courses: Try out your best students, using this examination. Proof that you are doing a good job comes in your men's being able to answer these questions.

Question 8—Which of the following types of motors is used on most domestic oilburners of the pressure-atomizing gun type?

A. Polyphase type, given current by either three or four 110-volt wires.

B. One-sixth horsepower, full load speed about 1725 rpm.

C. Shaded-pole type using between 25 watts and 50 watts.

D. Universal type that can run on either direct current or alternating current.

Question 9—The secondary voltage (which gives the spark) of the ignition transformer used on a domestic gun-type burner might be marked on the transformer as:

A. Either 110 or 220 volts.

B. Between 12 and 25 volts.

C. About 10,000 volts.

D. About 220,000 volts.

Question 10—The flame of a pressure burner keeps changing in size while the burner runs. Using a pressure gage, you find out the oil pressure on the nozzle drops to 60 lbs. every five minutes. This could be caused by:

A. Burner motor runs too fast.

B. Nozzle partly plugged, needs cleaning or replacement.

C. Flame is "leaving the nozzle," possibly because the fire is too lean or firebox is too long or too large.

D. A leaky suction line on an outside tank installation.

Question 11—A Btu or "British thermal unit" is:

A. An instrument used by a service man to measure the efficiency of a burner.

B. A unit of heat energy, or a yardstick for measuring amount of heat.

C. A unit used to protect electric motors against overloads.

D. An instrument used to measure flame temperatures.

Question 12 — A conventional swinging-disc type or similar draft regulator is installed on a smokepipe for the purpose of:

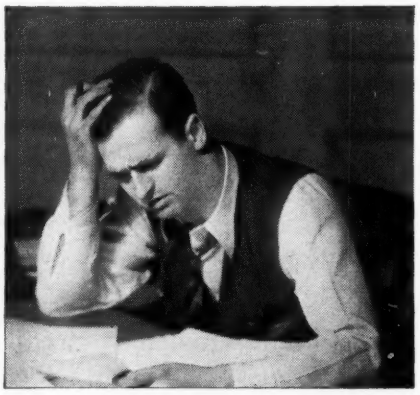
A. Reducing the size of an oil flame.

B. Preventing excessive over-fire draft.

C. Increasing the poor draft given by a defective chimney.

D. Avoiding overheating a stack control.

Question 13—The spark points or electrodes of a typical gun type oilburner usually should be set by this thumb rule (this is the length of the spark gap you provide in setting the spark points):



Remember that in certain cities you can lose your right to earn a livelihood as an oilburner service man, if you cannot pass an examination intended to show whether you are safe or unsafe at servicing burners.

A. Adjust for a 1/32" spark gap.

B. Adjust for a 1/64" spark gap.

C. Adjust for a 1/8" to 3/16" gap.

D. Adjust for a 3/4" to 1" spark gap.

Question 14 — The usual nozzle pressure or atomizing pressure used in a domestic "pressure" or "high pressure" oilburner is:

A. Five pounds per square inch.

B. 35 to 50 pounds per square inch.

C. About 100 pounds per square inch.

D. About 200 pounds per square inch.

Question 15—The usual speed for the motor of a domestic gun-type burner is:

A. About 1725 rpm.

B. Either 110 or 220 rpm.

C. About 3450 rpm.

D. About 10,000 rpm.

Question 16—A gun-type burner starts with a "Bang" because oil sprays into the firebox for a few seconds before the flame lights. Which of the following items could cause this trouble?

A. Defective starting switch in a split-phase burner motor fails to close when motor is idle, therefore needs repair or replacement.

B. Burner needs additional fresh air; perhaps you should open a basement window.

C. Stack safety control should be replaced because it permits the burner motor to start before the fuel unit is ready to re-start after an "off" period.

D. Improper adjustment of the spark tips or electrodes, across which spark jumps.

Question 17—This pressure-atomizing, gun-type domestic burner ran out of oil. After oil has been delivered, running the burner motor fails to produce a flame. The burner's oil pump or fuel unit fails to develop pressure. You should start the burner by:

A. Short-circuiting all the controls and running the burner motor continuously as long as proves necessary to get a flame.

B. Arrange to run the burner motor at very high speed, to make the pump develop higher than its usual vacuum and thus draw oil from the tank.

C. Loosen or remove a plug to let air out of the fuel unit or oil pump on the burner. Then run the burner motor and air-rid the oil pump.

D. Reverse the direction of rotation of the burner motor and run the burner's oil pump backwards for a few minutes until you produce a flame in the firebox.

Question 18—A draft gage often is used by a serviceman to:

A. Determine the maximum vacuum-gage reading given by a fuel unit

To take examinations is more and more in order as we become more civilized. If you think you are outstanding in your ability to service oilburners, can you prove this by getting an outstanding mark when you take this examination in competition with other service men?

or oil pump.

B. Measure smokepipe draft and over-fire draft of an installation.

C. Find out the percentage of heat in the oil which goes up the chimney.

D. Avoid the need to install a smokepipe draft regulator to cut excessive draft.

Question 19—The instructions you find on the job tell you that this certain pressure-atomizing, gun-type burner should use No. 2 or No. 3 fueloil. The burner has a 4.0 gph nozzle. Which of these answers might you give the owner, after he asks if he can use No. 6 fueloil in this burner?

A. Better use only No. 5 oil.

B. Don't try using oils heavier than Nos. 2 or 3.

C. It's all right to use No. 6 oil in this burner, if you heat the oil to 120°.

D. It's all right to use No. 6 oil in this burner, if you heat the oil to at least 180° using a separate oil heater.

Question 20 — A burner control panel mounted on the smokepipe has a heat-sensitive element located inside the smokepipe, which frequently becomes sooted and therefore causes the burner to stop "on safety." You should try to end this trouble by:

A. Cleaning the stack control's sensitive element and adjusting the burner to give a cleaner flame.

B. Adjusting the stack control for a five-minute safety period, so that the burner does not stop "on safety" because the stack control acts slowly following a long "off" period and a very cold start.

C. Using lubricating oil on the moving parts of the stack control, thus insuring more rapid action from them.

D. Doubling the size of the fire the burner gives, to arrive at higher stack temperature and more rapid action from the stack control.

Question 21—You are converting an old coal-designed, warm-air furnace to oil, and you plan to fire 1.25 gallons of oil per hour from a gun-type burner. You should install a firebox of about the following length, measured from the nozzle to the backwall of the firebox:

A. Firebox length should be two inches or less.

B. Length should be between 4" and 5".

C. Length should be between 10" and 15".

D. Firebox should be between 30" long and 45" long.

Question 22—In using combustion testing instruments on a new furnace-burner unit which is supposed to be highly efficient, you can expect to get a CO_2 reading of:

A. Between 200% and 300% CO_2.

B. Less than 600°F. CO_2.

C. Between 30% and 45% CO_2.

D. Between 9% and 13% CO_2.

Question 23—In testing a newly-started domestic heating boiler of the hot water type, you expect high efficiencies. You might get a stack temperature reading of:

A. Between 2,000°F. and 2,500°F.

B. From 70°F. to 212°F.

C. Between 150°F. and 250°F.

D. Between 400°F. and 650°F.

Question 24 — An oilfired steam boiler gives no chimney smoke, and gives combustion test readings of 900° stack temperature, 12% CO_2, and minus .02" over-fire draft. Running the burner continuously for three hours fails to raise any steam pressure (pressure gage on boiler keeps indicating zero pressure) and fails to heat all the radiators in the house. Which of the following items might cause this trouble?

A. The oil flame simply is too small for the load; efficient, economical operation will result from increasing the firing rate perhaps 30% to 50%.

B. The boiler already has too much fire in it, and is undersize for the load on it.

So you think we give the wrong answers? If you do, write us briefly and tell why. Warning: your name and address will be published together with your ideas, so they'd better be good!

C. An inefficient firebox, which should be replaced, is the cause of the CO_2 reading being as low as 12%. Installing a good firebox and adjusting for about 24% CO_2 will end the trouble and make the boiler carry its load easily.

D. The over-fire draft is too low. Increase it to raise the stack temperature to the proper level. That's all the job needs.

Question 25—You have complained to a burner manufacturer that a new pressure-atomizing, gun-type burner, connected to an outside tank, loses its prime often. The installation has an air-tight suction line and a return line. Following the burner manufacturer's instructions, you applied a vacuum gage to the fuel unit of the burner. With the burner running normally, which of the following vacuum gage readings would you expect to obtain?

A. Between five and 15 inches vacuum.

B. Between 200 and 300 inches vacuum.

C. From 90 to 110 pounds vacuum.

D. About 40 to 75 ounces vacuum.

* * *

Men who have gotten low marks in examinations often complain that they could not understand the questions. The answers to that complaint are: First, the men who took the same examination and got high marks understood the questions. Second, the man who doesn't understand simple English should not be servicing oilburners, because he can't understand the instructions that come with complicated equipment and which must be followed for the sake of safe, dependable, and economical operation of the equipment.

❖

OPS grants price Relief along New York Waterways

SUPPLEMENTARY REGULATION 6 to Ceiling Price Regulation 17, issued by the Office of Price Stabilization to be effective March 8, authorized increases of from one-tenth to four-tenths of a cent per gallon on kerosene, No. 2 fueloil and other distillates to sellers of these products at terminal points along the upper Hudson river, New York State Barge Canal and upper New York state waterways.

OPS explains that the increases have been authorized to offset higher barge rates which were charged after ceilings were established on the base period, December 19, 1950 to January 25, 1951. The action was taken in recognition of customary price relationships in the specific marketing areas affected and spells out uniform increases.

Take out the Stinger

Most fueloil Contracts insult the Customer

by
Kim Jepson

THE END OF THE HEATING SEASON is announced, at my house, by a blizzard . . . a blizzard of letters soliciting my fueloil business for the next season.

Ordinarily I brave the storm by promptly filing each virgin, unread letter in my round file. It's not that I don't believe in direct mail advertising, for advertising enables me to pay my income tax and my fueloil bill. I class them together because, believe me, they're almost neck and neck.

Yes, I believe direct mail sells . . . but most fueloil advertising is as flat as week-old gingerale. The sparkle is gone and it deserves to be thrown away unread.

Last spring, however, the first flake of the blizzard caught me unawares. I read it all the way through. Then I was unhappy all the way through.

Listen to it. Starts out "Dear Friend." What an assumption! But let's get into the letter itself.

"We would appreciate a contract with you, and will endeavor to satisfy your requirements in every way possible."

It's nice to know that they'd appreciate a contract "with" me, only I'm more interested in what they can do for me than in making them appreciative. Wouldn't "We will do our best to satisfy your needs because we appreciate your fueloil business" be a bit more diplomatic?

"We can assure you a continuous and reliable source of supply at competitive prices.

"For your domestic use, we offer to sell and deliver to the address shown on the acceptance card, Blank brand fueloil (grades 1, 2 and 3) subject to any and all Governmental regulations, rulings, directives or requests, from date hereof to May 31, 1952 under terms as follows:"

Ah! Fueloil! At last we find out what we are being "offered," though I'm a little uncertain about "domestic use" and I'm scared silly of "subject to any and all Governmental regulations, rulings, directives or requests, from date hereof." Incidentally, "hereof" is a wonderful word for a sales letter. But let's find out what the terms are.

"The price per gallon shall be the prevailing market price, plus all taxes, at time and place of delivery in quantities of 100 gallons or more. Deliveries made through metered tank truck hose connections.

"Terms: Cash, unless credit is established with us."

I took a breather here to consider. I understand about the price . . . I think . . . but what's about this "in quantities of 100 gallons or more?" That blunt, "Terms: Cash" all by itself in a separate paragraph is giving me a picture of Scrooge dictating to Bob Cratchitt. But there's more. The "terms" continue.

"You are to provide and maintain suitable storage and unimpaired access thereto by tank truck at all times at your own entire cost and risk. The Blank Fuel Company shall not be liable for damage of any kind, other than as a result of its own negligence.

"No liability shall be incurred for failure to deliver or accept delivery, in whole or in part, by reason of any cause or condition beyond the control of the party failing."

Scrooge must be a lawyer, too. Look, Mr. Blank Fuel Man, since all I want is to buy some oil and have it delivered regularly, I don't believe you'd be interested in my piddlin' little thousand odd gallon order.

"This offer, and its acceptance as evidenced by your signature on the enclosed postal card, will, when received by the Blank Fuel Company, constitute the entire contract between us for the 1951-52 season and shall be considered personal, and subject only to written modification or change."

That 49 word sentence lost me at the turn. And it was the bale of straw that finally broke the prospect's back. If this outfit turns out to be the last source of fueloil left me, I'll go back to coal—John L. Lewis can't be as hard to do business with.

That letter, so help me, is quoted verbatim, and came from one of the oldest and largest dealers in our town. While it completely unsold me on ever doing business with Blank, it did sell me on saving all the other fueloil sales letters to see if it was representative.

I have last year's crop stacked in

front of me now and "Dear Friend" still gets my vote as the salesman most unlikely to succeed.

Form Letter is O.K.

Compare it with this letter from another large dealer which is the cream of the crop. It's a form letter, true, but it is well printed on an attractive two color letterhead and my name and address are expertly filled in.

"Dear Mr. Jepson:

"Of course, you are interested in a bargain. Everyone is. And since Webster defines 'bargain' as 'over and above what is stipulated' we feel that the fueloil service we can offer you is a bargain in the strictest meaning of the word.

"Truly, there is not one whit of difference in the fueloil you buy from any of the major companies. It is all good. The price is exactly the same. But since people like to buy from people, it has occurred to us that perhaps we were amiss in not telling you what the folks here at Doe Fuel do that is 'over and above what is stipulated' in a Fueloil Agreement.

"Number 1, we make sure of the unwavering quality of our oil by contracting for our supply from one of the largest and finest producers in the country.

"Number 2, we insist that the men who deliver the oil to you are intelligent, courteous, neat and trained to do the job quickly and efficiently from modern metered trucks with no inconvenience to you.

"Number 3, we maintain a 'foolproof' check and fill system which means that we automatically keep your tank filled, relieving you of any and all responsibility for maintaining an adequate supply.

"Number 4, and this is perhaps the most important. We offer you the services of a heating engineer, to assist you in obtaining the greatest amount of efficient heat per dollar from your heating plant. He is at your beck and call and would be delighted to advise you at your convenience.

"We feel that we can offer 'over and above what is stipulated' and would very much appreciate the opportunity to prove it to you. We would be pleased if you would sign the Fueloil Agreement for the heating season 1951-1952, return the lower portion to us, and keep the top half for your records."

Here's the company that gets my business when I change. Their language is simple and friendly. I believe them because they admit what most of us consumers suspect, that fueloil is pretty much the same. So, after getting my confidence, when they tell me 1, 2, 3, 4 what they can do for me I'm ready to be sold. I believe they'll keep my tanks filled automatically, and I believe they'll send their heating engineer a'running at my first peep. In fact, I even believe he really is a heating engineer.

There's no legal gobbledy gook, either, in their Fueloil Agreement which is printed on a business reply card. Here's what it says:

"You may count on me as a regular customer for the next heating season as long as your Price, Quality, and Service are satisfactory to me.

"You will deliver the proper grade and quality of Doe Fueloil for use in my burner or burners.

"I will receive the benefit of any reduction in the market price during the period covered by this agreement.

"You shall not be responsible for any failure to make deliveries when due to conditions which are, in your opinion, beyond your control.

"You will continue the same type of delivery service and supply the same grade of Doe Fueloil that I am currently receiving unless I authorize a change to be made."

Where can I sign?

Ah! So free and easy on the draw! It has sell in every sentence. This I can sign without consulting my lawyer.

All of the other letters came between this and "Dear Friend," but none of them have any real sell. Let's look at a few at random.

Here's a company that sent me a series of three letters spaced one month apart. They alone recognized the value of continuity in advertising. But in one respect all three letters miss the boat, because of mighty poor mimeographing jobs. The first uses a good gimmick. "Yes" and "No" answer boxes to compare my present service with the service offered. Unfortunately, they try to cover too much ground in one letter.

The second letter is just plain confusing. It's headed "Why should you?," starts out "You're a fueloil customer . . ." and goes on from there without ever quite making its point. The third letter is almost good. It's spoiled by a trite, meaningless heading "Say? Have you heard?" and a poor and completely unrelated cartoon of one man grabbing another by the neck. The body of the letter isn't bad.

"Roe Fuel Service Company offers these summer advantages to its customers:

1. Price protection for summer fill.
2. Fill your tank now—pay next Fall.

"Price Protection—If Roe's Fueloil price drops between the time of delivery and September 1st, Roe will refund the difference between the price at time of delivery and Roe's lowest price before September 1st.

"Fill now, pay later—Roe Fueloil customers can have their tanks filled now, preventing summer moisture condensation; and they need not pay until October 1st.

"Sign up now as a Roe Fueloil customer and enjoy all the advantages of complete fueloil service. The enclosed card is stamped and addressed for your convenience. If you would like more information on these and other customer services, just call 5-7275."

Convincing Reasons

Two short selling points, explained in three short paragraphs. It gets the idea over and it offers something no other company did. I wonder though if preventing summer moisture condensation isn't more important to the consumer than "Fill your tank now—pay next fall." Seems the cart's before the horse in this case. I've got to be sold on filling my tank now before I start worrying about paying for it.

The letter from my present source is lacking in sell. It simply assures me "There is not going to be any shortage of fueloil for Brown customers" and asks, pleasantly enough, for my renewal. Unfortunately, that frightened me, so I made a Maintenance Service Agreement with another fueloil company as a hedge in case oil did get scarce!

Only one of the mailings I received

contained a printed advertisement rather than a letter. This change of pace could have been refreshing and earned a reading except that it was poorly laid out, had 'way too many words and was poorly done. I wasn't interested in the big picture of the president of the company either.

There, as a consumer, I've delivered a full measure of complaint. Now, as an advertising man, what constructive suggestions can I offer?

Use some Imagination

Well, first of all, there's more than one way to skin a cat. You don't have to use letters. Ingenuity and thought will develop different and effective approaches. Or use what is known in Advertising as the "Hat Trick." Put on your hat and go out and talk to a few customers and prospects. Don't try to sell them. Just visit and make mental notes.

For example, how about a simple calendar going from May to May instead of January to January. It doesn't have to be large or expensive because a small calendar, easy to read, gets better acceptance in most homes. I would like a one sheet calendar that covered the heating season. I'd hang it by the furnace to check off the date each time I oiled the motor and blew off the sediment trap.

Or take advantage of the fact that the average home is short on blotters. You can tell your story on a blotter and it will be around for a long time.

Remember, everybody talks about the weather, particularly the man that pays fuel bills. You have the figures on the severity (they're always severe) of last winter compared to previous winters in degree days. Put them on a card with your sales message. It will be read and saved.

Your new approach doesn't have to be an item that is useful. Consider a series of postcards with short, punchy copy. Remember, repetition and continuity are two of the most important principles of advertising. Or try multilithed reproductions of letters of appreciation from your customers. Sure, they're testimonials, but testimonials still sell.

These suggestions for a new approach may or may not be good, but they should help start your mental cogs turning toward ideas of your own.

When you have decided on how you are going to send your new business message, whether it be a letter or something else, keep these points in mind when you prepare it.

1. SELL WHAT YOU HAVE. Your prospect will hear from your competitors, so don't waste time selling him what all of you have. Sell him the advantages you alone can offer, even if you have to become a merchandiser and develop some advantages.

2. BE BELIEVABLE. Tell the truth, even if it hurts. Get the prospect's confidence and he'll go along with your claims.

3. KEEP IT SIMPLE. Remember, you may spend hours writing it, but your prospect will spend minutes reading it—he won't sit down and study it.

4. MAKE IT ATTRACTIVE. If you'd employ a sloppy, ragged salesman, then send sloppy, unattractive advertising. Even in as small a matter as mimeographing a good job costs no more.

5. MAKE IT EASY. You may have the best durn oil and service in town but you won't have customers pounding at your door if it's hard to do business with you. You're in business to serve, so get off to a good start by making it easy to order from you.

6. KEEP IT SHORT. Tell your story, but don't use fancy phrases or rambling explanations. Above all, remember you're competing for the prospect's time and attention with the *Saturday Evening Post* and Faye Emerson.

Co-Operative buys Fueloil for 73 Companies in Brooklyn

HEATING OIL SUPPLY difficulties during the 1947-48 heating season were particularly tough on the relatively small independent fueloil retailers. Many of them did not have any bulk storage facilities of their own, and these companies had a real struggle to secure enough oil to keep their customers' burners going.

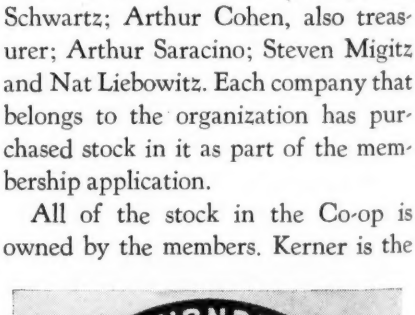
Some of them, of course, were under contract to regular suppliers and received regular allotments, but that season these were often insufficient for their needs and they were forced to haggle in the open market for the rest.

The aftermath of this situation was the formation of the Fuel Oil Merchandising Co-Operative, Inc. in Brooklyn, N. Y., composed of 73 independent retailers. Harry Kerner, executive secretary, explains that the Co-Op was organized on a long term basis to act as purchasing agent for its members to insure them a continuing supply of fueloil. The immediate objective was accomplished in its first year of operation when the Co-Op handled 7 million gallons of product. Averaging only 96,000 gallons per member, the organization obviously was used during that time to supplement the member's other sources of supply.

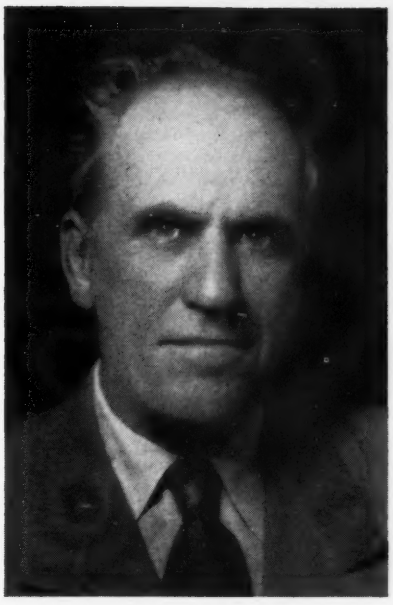
Today the Co-Op is buying more than 20 million gallons annually for the same group of 73 members, an average of 275,000 gallons for each one.

John Scovell is president of the Co-Op and a member of its board of directors. In addition to Mr. Scovell and Mr. Kerner, there are seven other members of the board: Roy Knutsen, who also is vice-president; Salvatore Vitale, who also functions as secretary; Sol Schwartz; Arthur Cohen, also treasurer; Arthur Saracino; Steven Migitz and Nat Liebowitz. Each company that belongs to the organization has purchased stock in it as part of the membership application.

All of the stock in the Co-op is owned by the members. Kerner is the



Harry Kerner



John Scovell

only full-time executive, the other officers all being active in the operation of their own fueloil businesses.

The Co-Operative does not insist that its members purchase all of their fueloil requirements, but instead executes individual contracts with each. The member agrees to purchase a specific amount of No. 2 and/or No. 5 fueloil during a one year period at the current price in effect at the time of delivery to his trucks. A monthly quota is established for the 12 months of the year, with the member agreeing to purchase at least 75% of the quota each month. In the event he fails to meet this requirement for two consecutive months, the Co-Op has the option to terminate deliveries. On the other hand, if he has previously purchased in excess of the monthly quantities, the excesses are carried forward to complete subsequent monthly quotas.

During June, July and August the member is obligated to purchase 2% of the yearly quota each month and during the next three months he agrees to take 21.3% of the amount he has contracted for. The largest portion of his yearly purchase from the Co-Op, 61.2%, must be purchased during the months of December, January, February and March, and the balance, 11.5%, is handled during April and May. This allows for orderly scheduling by the Co-Operative and permits the purchaser to have access to the larger amounts of fueloil needed during the coldest months of the year.

Bulk storage facilities are rented by the Co-Op in a terminal at Belt Parkway and Bay 38th Street, Brooklyn, where better than 1 million gallons of storage are provided. The organization's office is located here at the terminal.

Besides purchasing fueloil for its members on a cooperative basis, the organization enlarges its services by providing a credit service. It subscribes to a daily litigation bulletin, which lists the plaintiffs and defendants in credit litigation and for a nominal fee it investigates credit applications of every new customer. Interchange of this information between members has proved helpful in cutting down losses from bad accounts. Even with the improvement that has been achieved in reducing credit risks, the organization still recommends that each new customer be carefully checked as to credit rating and the names of all delinquent accounts be reported to the office.

A collection service also is operated for those members who desire it.

Harry Kerner emphasizes that the Co-Operative, while functioning as a purchasing agent for its members, each of whom also sells, installs and services oilburners, takes no active part in the conduct of their businesses. Each runs his own company in the way that he sees fit and gains the advantage of participating in the use of a bulk plant and pick-up point, without incurring the necessity to be concerned with bulk plant operation. His trucks are not restricted to specific hours or days when other terminals might be open or closed, but can be loaded at any hour of the day or night on any day of the year.

Kerner also points out that "The Co-Operative is not now, nor has it ever been, a speculative venture. We contract for the entire heating season's need during the summer months and do not rely on purchasing in the spot market." In this way, he explains, the member can be sure that their fueloil needs are arranged for and that they will be able to buy regularly at current posted prices.

The organization, which is a member of the Empire State Petroleum Association, holds monthly meetings for mutual discussion of problems and plans, has sponsored three dinner-dances and is making arrangements for the fourth to be held next Fall.

Summarizing, the Co-operative offers each member the advantage of exerting some control over his fueloil supply without owning individual bulk plants, permits him to participate as a stockholder in the operation of the organization, plus the opportunity to benefit from the credit and collection services that are available to him.

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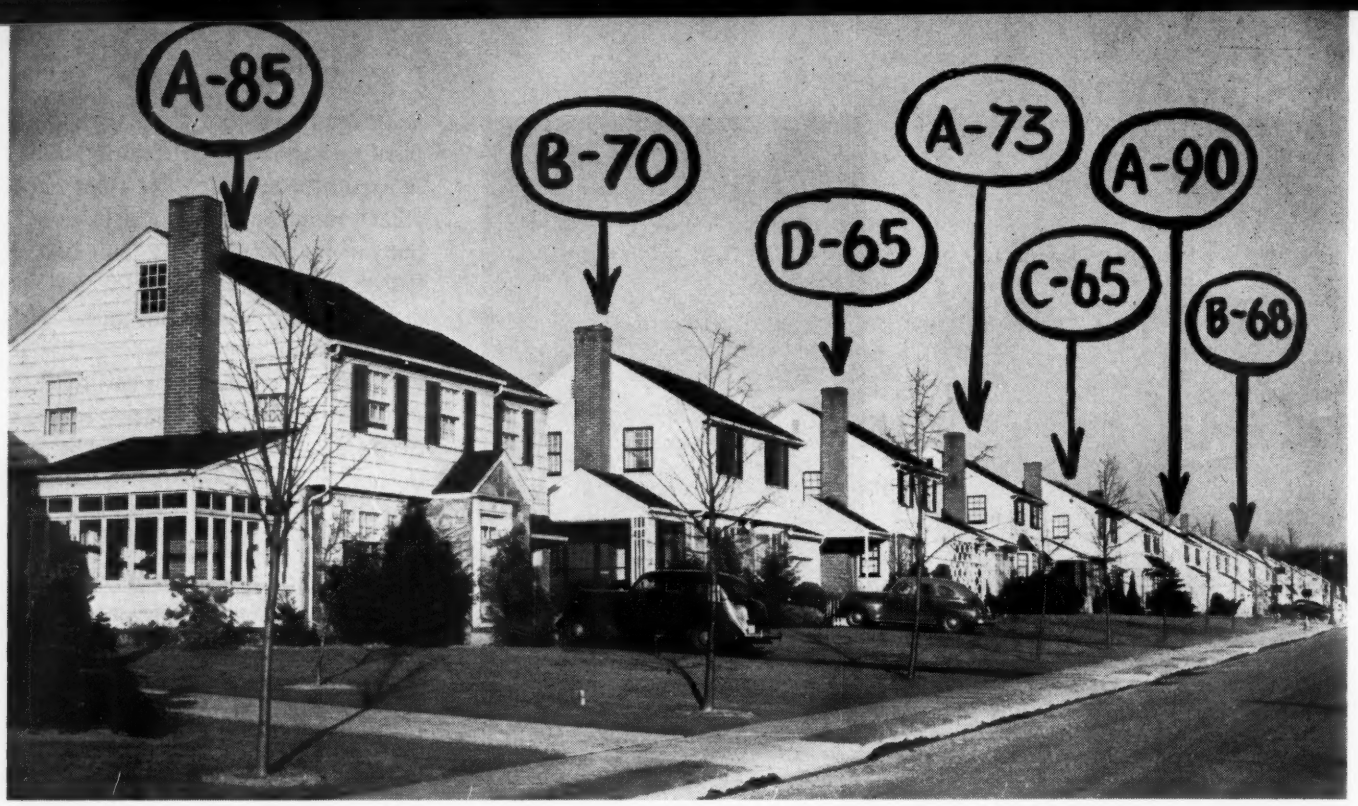
James O. Kemm, former Springfield, Mo., newspaperman, has been appointed Kansas City district representative, Oil Industry Information Committee, American Petroleum Institute, New York, N. Y. Before joining OIIC, Kemm worked on the editorial staff of the *Leader* and *Press,* Springfield for three years, before which he was an assistant professor of journalism and director of publicity, Rider College, Trenton, N. J.

Examination Answers

Answers to questions of "Domestic Oilburner Examination," which starts on p. 88: 1—C, 2—C, 3—C, 4—A, 5—D, 6—C, 7—A, 8—B, 9—C, 10—D, 11—B, 12—B, 13—C, 14—C, 15—A, 16—D, 17—C, 18—B, 19—B, 20—A, 21—C, 22—D, 23—D, 24—B, 25—A.



How good are your fueloil Customers?

Here is a System for evaluating every Account you have

by

Kirk B. Shivell*

TWO FUELOIL COMPANIES operating in the same area may have plants and businesses of equal size, yet one company will make more money than the other. Why? It might be because one company is handling a large percentage of relatively unprofitable accounts.

Some accounts are much more profitable to handle than others and it will pay a fueloil dealer to study his customers and prospects, evaluate them; then strive to eliminate the relatively unprofitable and concentrate on those he can make the most money from. Of course, it is realized that many fueloil operators just don't have the time or the personnel to study and evaluate accounts, and the idea of doing so may therefore be impractical for them. However, where a company has a business of large size, it may profit considerably by the rating of accounts. Not only should it be possible for a larger company to set up a system for appraising accounts and to allocate personnel to do this job, but it may be particularly important for a larger company to do it. Many larger companies reach a point of diminishing return as business grows. They need to concentrate on profitable accounts if they are to make a satisfactory return for investment of capital and effort.

The following system for evaluating accounts was originally developed for use by a large oil company. Analysis disclosed that six prime factors determine the relative value of a retail fuel oil account:

1. Payment for oil
2. Amount of fuel consumed
3. Price at which oil is sold
4. Tank size
5. Time required to make a delivery
6. Extent to which delivery is automatic

As will be seen in the accompanying table, each of these factors can be given point values. The total points which a customer rates will indicate how profitable he is to the company which sells him oil. (The point values as given here would not necessarily be the same for all companies, and therefore may be adjusted to fit more accurately any particular company's operations. However, in no instance should there be any very wide variation.)

In a general way, the relative importance of the six factors is indicated by the order in which they are listed in the table. For instance, credit is listed in first place, for the financial responsibility of a customer or prospect must be given primary consideration. No account can be regarded as being worthy of a desirable general rating if continual prodding is required to collect or if the account is likely to become a bad debt.

The following total point ratings are a fair guide in evaluating the desirability of customers from a probable profit-making standpoint:

75 to 100 points—Excellent
65 to 75 points—Good
50 to 65 points—Fair
35 to 50 points—Poor but Acceptable
12 to 35 points—Undesirable

No customer will have a lower rating than 12 points. This figure reflects not

*Mr. Shivell is president of Kirk B. Shivell, Inc., specialists in oilheat marketing and advertising, 424 Madison Ave., New York.

only a low financial grading, but also the lowest annual oil consumption and the least satisfactory conditions of delivery.

Where customers are evaluated, they should be given not only the total point gradings to which they are entitled, but also the credit gradings which they rate. For example, "A-85," "B-68," "D-65," etc. By this means, it is possible to see at a glance both credit standing and general desirability standing.

The headings of the tables are more or less self-explanatory, but the following comments may facilitate proper rating of accounts:

1. Credit Grading

An "A" customer is one who will pay his bills promptly when due and who requires no collection effort on the part of the oil company.

A "B" customer is one who may be somewhat slower than an "A" customer in sending his checks, but who is really a stable and responsible person from whom no credit loss is to be expected, even though his account may entail a limited amount of collection follow-up.

A "C" customer is one who is regarded as being a potential risk, and whose account must be kept under continual surveillance.

A "D" customer is a definite bad risk, the sort of person to whom it is unsafe to extend credit. Usually accounts in this category must be collected from in advance of each delivery, a procedure which involves inconvenience and delay for the oil company.

2. Oil Consumption

The quantity of oil which a customer uses has an important bearing on his desirability and potential profitability. To a considerable degree, it costs an oil company just as much to sell, bill and otherwise handle a small account as a large one.

3. Discount

Today most fueloil business is done at full retail price, and most leaders in the industry agree that the granting of discounts is a practice that should be emphatically discouraged. Nevertheless, the price structure in some localities may require the extension of discounts based on volume or on certain local conditions. When this is true, it is evident that the discounts a company is obliged to grant will have a direct effect on profits. Therefore, the discount factor must be given proper weight in the evaluation of accounts.

4. Tank Size

Obviously, a customer with a large storage tank is likely to be more profitable to serve than one with a small tank which requires more frequent drops. However, it is necessary to take some other conditions into consideration, for they may affect the advantages of a large tank.

For example, if a customer has a 1,000 gallon tank but his credit is good for only deliveries of 500 gallons, he should be regarded as having a tank of "551 to 1000" and given 10 points. Similarly, if a customer with a larger

Tables for Use in Evaluating An Account

(The point values shown may be varied somewhat if a dealer's particular operating conditions make it more accurate to do so)

TABLE 1
Credit Grading

	Points
"A"	25
"B"	15
"C"	5
"D"	0

TABLE 2
Consumption

	Points
Over 5000	20
3001-5000	15
1501-3000	10
1500 or less	5

TABLE 3
Price

	Points
Full list price	20
¼¢ off	10
½¢ to ¾¢ off	5
More than ¾¢ off	0

TABLE 4
Tank Size

	Points
Over 1000	15
551 to 1000	10
276 to 550	6
275 or less	3

TABLE 5
Time Factor

	Points
Speedy	10
Prompt	6
Slow	4
Difficult	2

TABLE 6
Degree-Day System

	Points
Fully Automatic	10
Automatic—with notice	8
Customer will call	5
Split Act.—Not on D.D.	2

NAME .....
(*Last*) (*First*) (*Middle*)

Address .....

Date of Evaluation .....

Account No. ..... Rating .....

POINT EVALUATION:

1. Credit Grading .....
2. Consumption .....
3. Price .....
4. Tank Size .....
5. Time Factor .....
6. Degree-Day System .....

Type of Card *Used in Customer Evaluation System*

tank habitually requests deliveries of less than tank capacity, even though his credit is not limited, he should be regarded as a smaller tank customer.

5. Time Factor

The time factor often requires careful consideration and calculation. It is determined most accurately, of course, when it is based on actual experience with an account. Often, the time factor in a delivery can be arrived at by consideration of the road distance of a customer from the plant, but frequently the factor will be affected by circumstances which increase the cost of delivery from the standpoint of personnel time or wear and tear on equipment. A single mile of travel through heavy traffic may require more time and equipment cost than a much greater distance through relatively open traffic. A five mile trip to an isolated customer who has a small tank may be far more costly to the oil company than a 15 mile trip to a customer who has a larger tank and who is near other customers who can be taken care of on the same run.

Furthermore, consideration should be given to all conditions which affect the time factor at the point of delivery: Is the fill pipe in an unhandy location? Is it difficult to maneuver the truck before and after making the drop?

6. Degree-Day System

A customer on fully automatic delivery is worth more to an oil company than one who is not. Therefore, the points credited to a customer should reflect the extent to which the account can be serviced automatically. If systematic degree-day deliveries cannot be made for any reason, either the customer's insistence that he be notified in advance or that he will accept delivery only when he requests it, the number of points credited to him must be reduced.

The "split" account is a special problem. This type of account, in general, deserves the lowest rating in this category, but sometimes there are mitigating circumstances. For instance, there might be a store owner who likes to divide his oil business between a couple of companies for reasons of friendship. If such a customer can be persuaded to divide his business so each oil company can make some reasonable prediction of volume and delivery times, the value of the account is correspondingly enhanced.

Keeping card Records

Where this system is used, the rating of each customer and prospect should be kept on a record card similar to that illustrated here. Moreover, every office record of the customer or prospect should show his rating so that this information is readily accessible at all time to members of the organization.

The full value of this sysetm can be realized only where every customer and every prospect is appraised and genuine efforts are made to replace low-profit customers and to avoid low-profit prospects. When a company purchases something it usually endeavors to get the best value for its expenditure. Customers are bought, too. They are paid for with sales expense and with the money that must be invested in plant, equipment and manpower necessary to serve them. It's only good business to buy the best customers possible.

❖

Gulfstream Chapter holds inaugural Meeting

AN INFORMAL DINNER and party of Oil Heat Industry members vacationing in Florida in February, and some local oilburner men, resulted in the formation of a fun-and-sun seeking "Gulfstream Chapter," set up to hold an annual winter get-together. The affair was held at the Coral Ridge Yacht Club, Fort Lauderdale, February 26.

Those attending, shown in the picture were (standing) left to right, Arnold Eckhart, Eckhart Mfg. Co., Union, N. J.; Mrs. Stanley Czarnecki; Jim Owens, Mercoid Corp., Chicago, Ill.; Stanley Czarnecki, Eddington Metal Specialty Co., Eddington, Pa.; Art Winkler, FUELOIL & OIL HEAT, New York City; Mrs. Casimir Czarnecki; John Hancock, Marietta Metal Products Corp., Marietta, Pa.; Bill Queen, Tamco Supply Corp., Tampa, Fla.; Casimir Czarnecki, Eddington Metal Specialty Co.; Emil H. Dietz, Jr., Dietz Oil Burner Co., Ridgewood, N. Y.; Emil Dietz, Sr., Dietz Oil Co., Brooklyn, N. Y. Seated, left-to-right, Mrs. John Hancock, Mrs. Arnold Eckhart, Mrs. Jim Owens, Mrs. Art Winkler, Mrs. Emil Dietz, Jr., and Stan Alford, Tamco Supply Co.

Mr. Hancock was elected President of the chapter after a highly spirited campaign; Mr. Eckhart became treasurer, and Mr. Winkler, secretary. "The difference between this chapter and the regular chapters," said Mr. Hancock, in his inaugural address, "is that our meetings will tolerate no business discussions. Anyone attempting such heresy will be fined. Our chapter, as the name indicates, is a floating one, in more ways than one, but we hope to keep our home base in Ft. Lauderdale and our activities on a properly hilarious scale. All members are required to be sun-tanned."

All the officers are anxious to hear from potential members in the oilheating industry who may be in southern Florida next February, and who might be interested to attend.

Cartridge Filter cleans boiler Water

Simple Accessory eliminates Priming and prolongs boiler Life

by
Everett B. Glendenning

Editor's Note: Mr. Glendenning, recently retired as director of the Products Application Laboratories of Shell Oil Company at Sewaren, N. J., and now a consulting engineer, is working with the engineers of Purolator Products, Inc., Rahway, N. J., to produce a new type of steam boiler water clarifier. Following is Mr. Glendenning's story of the early development of this novel home-heating facility, which he and Lawrence H. Ventres completed at the Shell Laboratories. The clarifier will be manufactured by Purolator. Development is under way on commercial and industrial applications with larger-sized clarifiers, also using a Purolator filter element.

THE ACCUMULATION OF RUST in domestic heating boilers has presented a problem to the home owner for many years and various methods have been tried from time to time to lessen or eliminate rusting, in steam heating systems.

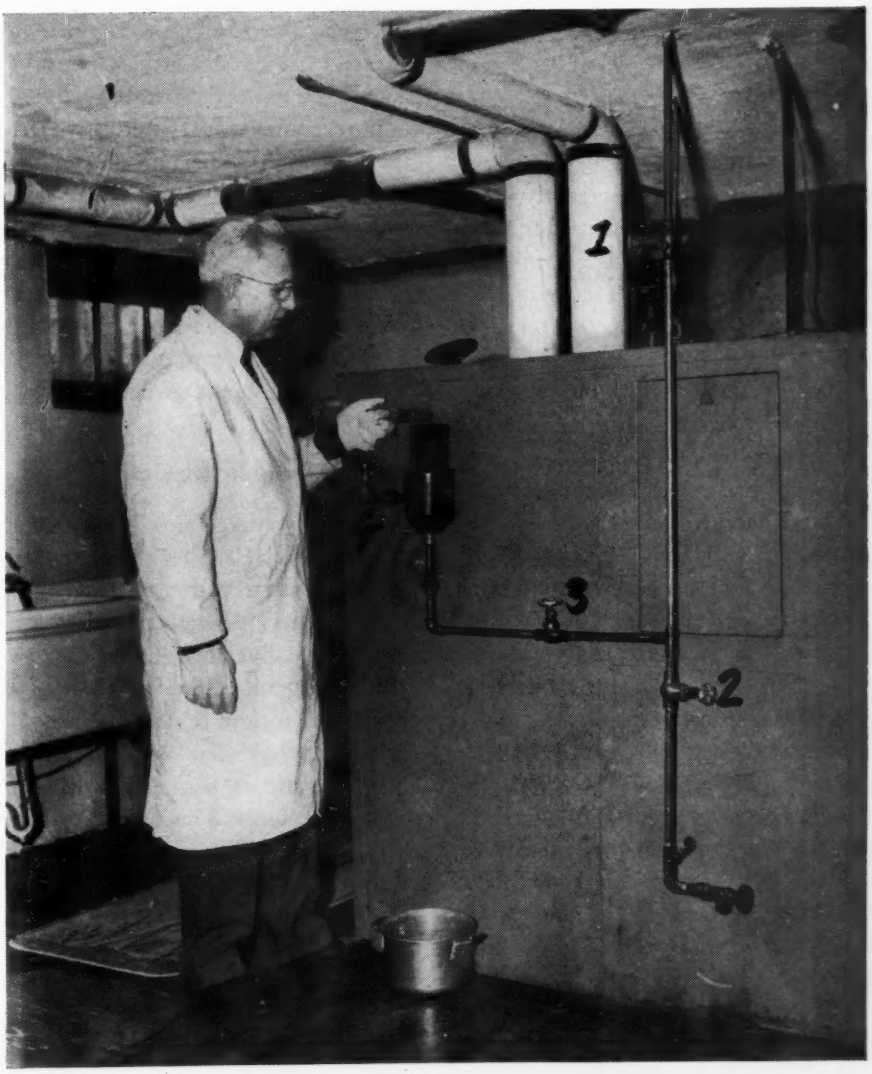
There have been numerous compounds placed on the market, some of which have proved beneficial in decreasing rust formation in both steel and cast iron boilers, and in cleaning the boiler water to prevent priming—which leads to the annoying cracking sound in steam heating systems known as "water hammer." However, the application of any of these compounds often presents a problem, especially to the home owner.

Some months ago, a portable pumping unit was built consisting of a water pump and a Purolator filter having low resistance to flow characteristics, suitably piped and connected with hoses so that water could be circulated from the mud drum of the boiler through the filter and returned to the boiler through the safety valve connection.

The pump was operated for thirty minutes while the boiler was steaming. Examination of the filter after a short pumping period showed it to be heavily coated with rust. The water in the gauge glass was found to be much cleaner than before the circulating period. This was the first attempt to clean boiler water by filtration.

To further prove the worth of the use of a filter for conditioning boiler water a filter was fitted to a 22" Arco boiler in such a manner as to allow gravity circulation from the lower try-cock connection through the filter, returning to the boiler at the base through its normal return line opening. After eight hours of operation, the removable filter cartridge was examined and found to be covered 1/8" thick with fine iron rust.

The following day the boiler was operated for eight hours and again the cartridge was found to be heavily coated with rust. Water in the gauge glass by this time appeared clear. The above process was repeated three times and the last time there was a very no-



Mr. Glendenning *shows the filter in the new Purolator boiler water clarifier. It is not necessary to open the filter as shown above, to clean the element. This is done simply by closing valves 2, 3 and 4, opening the drain cock on the filter, opening valve 1 and slowly opening valve 3. As soon as water from the drain cock is clear, valves 1 and 3 are closed, the drain cock closed, and valves 2, 3 and 4 reopened.*

ticeable reduction in rusty material on the cartridge.

Serious priming in an oilburning boiler was experienced while conducting thermal efficiency tests. The priming was so severe that the condensate measuring device with which the boiler was equipped would not function properly. A filter was installed on this unit between the blow-off of the low water cut-off and the boiler return line. The following day a continuous test of six hours' duration was conducted, followed by an intermittent test of 12 hours duration. Examination of the filter cartridge at the end of these two runs showed it to be coated with approximately ⅛" of dark colored rusty sludge. Priming of the water was eliminated by the effectiveness of the filter in removing the foreign material, and the condensate measuring device worked satisfactorily.

Portable Unit

Before starting a series of efficiency tests on a steel boiler recently, the portable filtering unit was used to preclean the boiler. Immediately following the cleaning process a series of efficiency tests were conducted on this boiler with a filter installed in the same relative position. No difficulty was experienced from priming throughout the test period.

A new boiler with filter installed, has been operated for a total of approximately 30 hours during which rust has been observed to be collecting on the filter cartridge. Experience shows that a steel or cast iron steam boiler immediately starts to rust when it is placed in service.

From this, it is apparent that there are several benefits to be derived from a suitable portable filter to preclean the water in a domestic steam boiler, and also to have a removable cartridge type filter permanently installed on the boiler to keep the water clean. These benefits are:

No more priming

1. *Elimination of Priming:* When priming occurs in a domestic heating boiler the usual method of overcoming it is to treat the water with a boiler compound which in many instances temporarily aggravates the condition and requires the immediate blowing ing down of the boiler. Since the ordinary home is seldom conveniently equipped with a drain or sewer connection close to the boiler, it is sometimes necessary to carry the water in a bucket to a sink. Usually the boiler has to be emptied three times before it is properly conditioned. This is generally too much work for the home owner with the result that the boiler is never thoroughly clean.

In new boilers priming is caused by oil collecting on the surface of the water, the sources of which are: freshly cut pipe threads, new pipe, from packing in stuffing boxes of radiator valves, and in the case of cast iron boilers—from the lubricant used on the push-nipples. Oil is even more difficult to remove from the boiler than rust particles since the oil clings to the side of the boiler as the water is drawn off and floats to the top as the boiler is refilled. To properly remove the oil it is necessary to raise the steam pressure to five or ten pounds and give the boiler a "surface blow" which requires a hose or pipe connected near the top of the boiler so that oil on the surface can be blown and floated from the top of the water. This operation is usually more than the home owner can cope with.

Eliminate draining

Both the "surface blow" and draining of the boiler can be eliminated by the use of the portable filtering unit. Approximately 30 minutes of water circulation will remove most of the suspended rust and only a few minutes is required to reverse the hoses and skim the surface free of oil by placing the end of the suction hose just at the surface of the water. This work could be carried out at the time of the annual cleanup.

Severe priming may cause the system to become inoperative, but in cases of moderate priming there are attendant ills such as water hammer in radiators and piping, and damage to the radiator valves caused by dirt and oil carried into them. This is particularly true where expensive vacuum valves are used.

2. *Increased Efficiency:* Efficiency of the boiler is improved by removal of rust which generally cakes on the metal, preventing good heat transfer to the water. Removal of the oil from the surface of the water insures fast steaming.

Cleaner Accessories

3. *Greater Safety:* In many municipalities a low water cut-off is required by law on each oilburner installation. The purpose of this is to shut off the burner whenever the water in the boiler reaches a dangerously low point. Some of these devices are so constructed that rust can accumulate in them and cause them to become inoperative. For this reason, it is proposed to locate the permanent filter so that it will keep this safety device clean and in good operating condition.

In those installations where a low water cut-off is not used, a convenient inlet connection for the filter can always be made by removing the lower try-cock, or by extending both gauge glass connections and placing a tee in the lower one.

4. *Ease of Adding Inhibitors:* Several of the boiler compounds are a combination of cleanser and rust inhibitor. The use of a filter seems to provide a very convenient means of adding a rust inhibitor to the boiler water to prevent rust from forming during the summer months. To do this it is only necessary to remove the filter top as though the cartridge were to be changed, pour out a portion of the water and refill with inhibitor either in liquid or crystal form.

For all boiler Sizes

These new filter clarifiers may be applied on any steam boiler, large or small, whether fired with coal, oil or gas. A very neat installation can be made easily and quickly, by using where permitted ½" copper pipe and sweat fittings, including valves, tees, ells, etc.

The recommended installation includes valves that make it possible to clean the filter element by reverse flushing fresh water through it and catching the discharge from the drain cock in a bucket. The element should be cleaned about three times a season, and a new filter refill installed at the beginning of the heating season.

Are You making a Profit?

Some burner Dealers base their Mark-up on net Cost much to Their financial Sorrow

by
George Bernhard*

THE OILBURNER DEALER can accurately estimate the gross mark-up or profit he needs for every job which will pay his overhead costs, meet his salesman's commission and show him a profit. Yet some dealers are not sure after the contract is signed whether they are going to make a day's wages, much less take a loss after the job is completed! The secret is understanding how to figure gross mark-up or profit to gross cost, but unfortunately, this secret is too well kept.

As an example, there is the hypothetical oilburner dealer who does a $100,000 gross a year, $24,000 of which represents overhead. He needs, therefore, a 24% mark-up just to break even on administrative expenses.

This 24% mark-up is a good, safe general average which was arrived at as the result of a survey made within the industry. This survey was based on a cross-section analysis of thousands of questionnaires returned concerning operating expenses (no signature was required and this prompted a good response).

Of course, this is by no means a fixed percentage. Some firms need a higher mark-up because of more costly operations, others are able to operate on a smaller percentage because of economies effected. The individual dealer by making a study of his own operating costs, can arrive at the exact percentage of mark-up he needs to break even.

A further word about computing overhead costs before moving on is that in this grouping, something which should not be forgotten, but occasionally is, is the boss's salary. The boss sometimes overlooks and forgets his own value. No one puts in longer hours, has shorter vacations, gets more abuse or has greater aggravation. He is the expediter, the coordinator, the diplomat, the liaison officer and holds the loose ends together.

In figuring gross profit, it must be remembered that overhead makes up only part of that figure. Two other costs must be considered.

First our typical dealer has salesmen whom he pays both salary and commission. Naturally, the cost of the salesman's commission (10% is average) must be included in the final selling price. The salary which he is paid should be figured as part of the administrative cost.

The second consideration is net profit. Our dealer feels that a fair return on his invested capital should be 7% of his gross business.

Sitting down to compile the gross profit he needs, he gets the following picture:

Overhead	24%
Salesman's commission ..	10%
Profit	7%
Total	41%

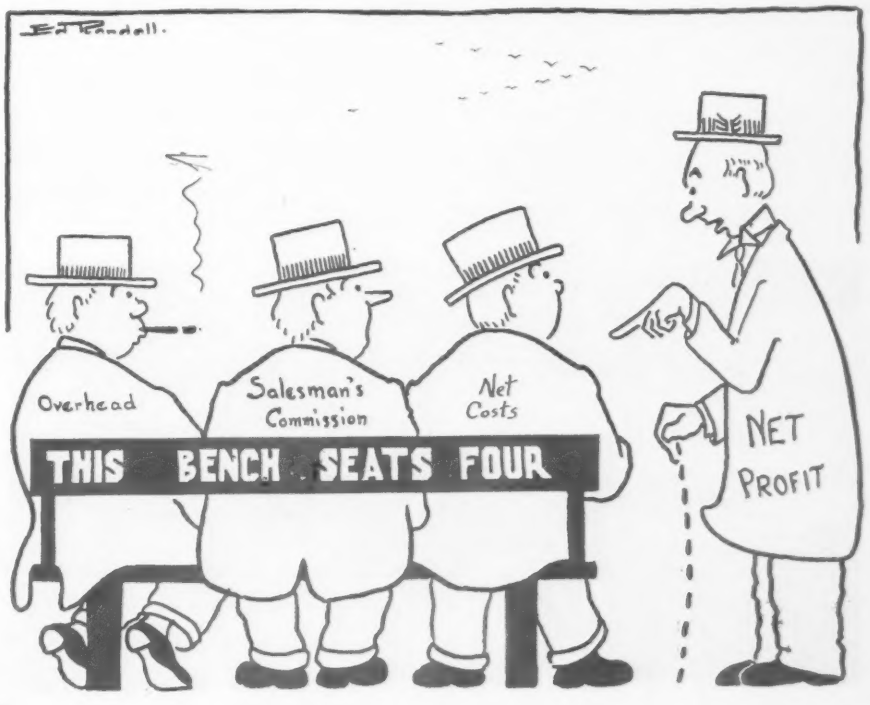
He has found that the actual cost of doing business (figuring profit as a cost) is 41% of his year's gross. Putting it another way, on every job he needs to make 41% gross profit. With this information he can accurately quote a selling price. Let's see how he does it.

He has a job that costs him net $100 (labor and materials). But before he can add on his 41% gross profit figure, he must first mark-up the net, with his cost of overhead and commission, plus his profit. He is using here the ratio of gross profit to gross cost, not just net cost which some dealers erroneously use much to their financial sorrow.

Not being an accountant, nor having the inclination to compute dozens of figures to proportion his overhead and commission costs to the individual job, he has found a convenient chart (Table #1) to which he can refer to and arrive at his selling price. Checking the chart he sees that by marking up the net $100 job by 70%, then selling it for $170, he makes 41% gross profit.

A second hypothetical dealer going through the steps already outlined, but substituting his own percentages, discovers he needs a 33-1/3% gross profit. According to Table #1, he must mark-up a $100 net job by 50% and sell it for $150.

Table #2 works out a number of



*Manager of Retail Sales and Engineering on Domestic and Industrial Installations for Shipley Cooling and Heating, A Division of York-Shipley, Inc., York, Pa.

Table #1

% Added to Net Cost	% Gross Profit Attained
15	13
17½	15
20	16⅔
25	20
30	23
35	26
40	28½
45	31
50	33⅓
55	35½
60	37½
65	39½
70	41
75	42⅔
80	44½
85	46
90	47½
100	50

examples and gives the gross profit in terms of percentage and dollars and cents. Study these figures. They are accurate.

Our first dealer is confused as to why he needs to mark-up a net $100 job by 70% to make 41% gross profit. If gross profit includes cost of overhead, commission and profit, why can't he sell for $141 which pays his $100 net cost, $24 overhead, $10 commission and yet show a $7 profit. Our dealer has answered his own question. $24 is not 24% of his gross cost; $10 commission is not 10% of his selling price and $7 profit is not a 7% return on capital risked.

The dealer must always think in terms of gross cost. Every job must not only pay for labor and materials, but rent for the shop, cost of fixing the hinge on the back door and dozens of more items which an accountant is better qualified to list than I.

What our hypothetical dealer has done to intelligently arrive at a profitable but fair selling price can be done by every dealer. There is nothing in business more annoying and aggravating than an unprofitable job. Nor can the dealer stay in business unless he makes a profit consistently.

Table #2

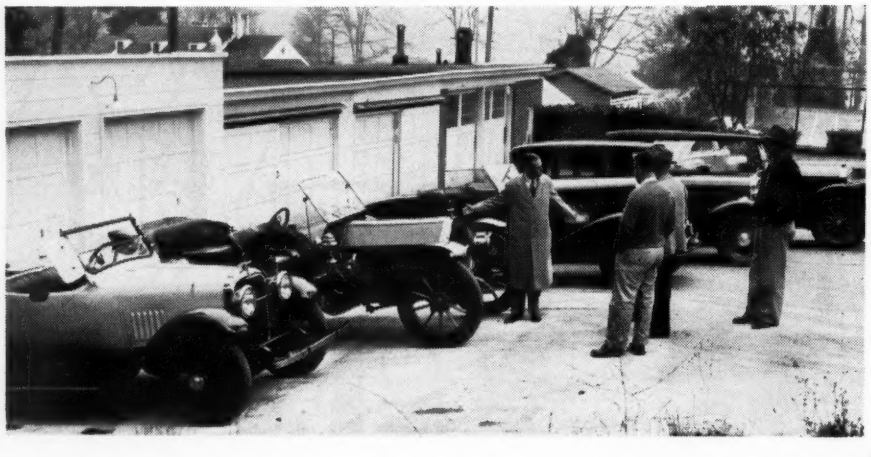
Cost of Labor & Materials	% Added To Cost	1st 2 Items = Selling Price	% Gross Profit Made
$100	20	$120	16⅔ or $19.99
100	30	130	23 or 29.90
100	40	140	28½ or 39.90
100	50	150	33⅓ or 49.95
100	60	160	37½ or 60.00
100	70	170	41 or 69.70
100	80	180	44½ or 80.10

Tacoma fueloil Distributor prizes five old-time Cars

EDWIN L. GRIFFIN, Tacoma, Washington fueloil dealer and motoring enthusiast, prizes a collection of five old-time automobiles, all in good running condition.

Griffin believes his bright red 1908 Palmer-Singer model, made famous by its popularity in road-racing meets, is the only one still operating. This prized car will do more than 60 miles an hour.

Other models in Griffin's collection are, a 1921 Mercer, 1929 Duesenberg, 1932 Oakland V-8 and a 1926 Pierce-Arrow.



Edwin L. Griffin *points with pride to his 1908 Palmer-Singer model which he believes is the only one still operating. Other models, from left, are a 1921 Mercer, 1929 Duesenberg, 1932 Oakland V-8 and 1926 Pierce-Arrow.*

U. S. Department of Labor Fueloil Prices (January)

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken January 15 (cents per gallon):

	Range	No. 1	No. 2	No. 3
Boston	15.07	14.57	12.60	..
Manchester	15.40	14.90	13.30	..
Portland, Me.	14.40	14.40	12.40	..
[3] Buffalo	14.95	..	13.74	13.74
[4] New York	..	..	12.71	..
Philadelphia	..	13.43	12.20	..
[1] Chicago	14.83	14.48	13.57	13.57
[4] Detroit	..	15.04	14.01	..
Milwaukee	..	15.04	14.01	14.00
[1] Baltimore	..	13.36	12.44	..
[1] Wash., D. C.	..	13.84	12.85	..
Jacksonville	..	14.87	13.25	..
Norfolk	..	13.60	12.20	12.20
Richmond	..	14.00	12.60	..
[2] Savannah	..	16.58	13.97	..
[5] New Orleans	..	14.33	12.77	12.77
Portland, Ore.	..	14.50	12.10	6.90
[6] San Francisco	..	13.87	11.54	6.85
[4] Seattle	..	15.33	13.20	7.11

[1] Prices include 2 percent tax.
[2] Prices include 3 percent tax on all fuels, plus an inspection tax of one cent per gallon on kerosene only.
[3] Prices include 1 percent tax.
[4] Prices include 3 percent tax.
[5] Prices include 3 percent tax on all fuels except gas; prices for kerosene and fueloil No. 1 also include one cent per gallon State health tax, and 1/32 of one cent per gallon State inspection tax.
[6] Prices include 3.5 percent tax on all fuels except gas.

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Alfred L. Agne has been appointed to the newly-created position of advertising manager, Eureka Williams' Corp., Bloomington, Ill. Agne previously was advertising manager for Brunswick-Balke-Collender Co. and a division sales promotion manager for Sears, Roebuck & Co. A former agency man, he was account executive with Cramer-Krasselt Co., where he handled field supervision for Norge Division, Borg-Warner Corp.

William A. Burns, Jr., has been named president, Trailmobile, Inc., Cincinnati 9, O. Since 1950 Burns was vice-president and general sales manager. Previously, he was vice-president and general manager, Wesco Foods; vice-president, James H. Rhodes & Co., and a member of the firm of A. T. Kearney & Co.

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Self-flushing, self-cleaning, self-draining, Skuttle Series 600 holds 5 to 20 evaporating plates—adequate for oil or gas fired warm air furnaces or winter air conditioning plants up to 180,000 BTU.

Adjustable bracket permits easy installation in straight or sloped plenum. Flush lever provides automatic cleaning.

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Holds up to 40 evaporating plates. For large homes.

SKUTTLE SERIES 500 HUMIDIFIER

Pan type, without plates. For coal fired warm air furnaces.

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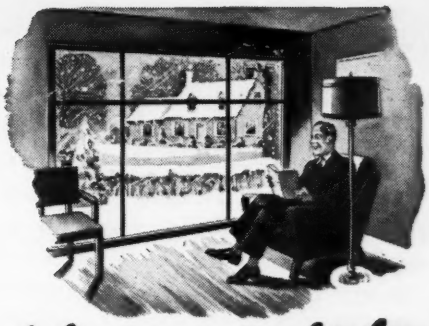

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Book Shelf

ASHVE 1952 Guide is revised and enlarged

THE 1952 EDITION of The Heating, Ventilating and Air Conditioning Guide, published annually by the American Society of Heating and Ventilating Engineers, recently issued, is an enlarged and revised edition. This, the 30th edition, has a total of 1,520 pages, with 32 pages of new data added to the 1,064-page Technical Data Section. The association's Guide Committee, which prepared the book, reviewed the entire volume and made important revisions throughout. Chapter arrangement remains the same, with subjects grouped under 7 section titles. New codes and latest editions of all codes have been included in an enlarged list.

Special improvements have been incorporated in the chapters on heat transmission coefficients of building materials, heat transfer, heating load and cooling load. The residential chimney section is rewritten to emphasize performance and selection of low-height chimneys for basementless and other low buildings and the section on oil and gas fuels includes more information on properties and combustion data for present day fuels.

Up-to-date boiler rating information and an abridged table of I-B-R boiler ratings has been added, while information on baseboard type radiators has been extended with the addition of Btu ratings to the previous E.D.R. ratings of currently manufactured sizes.

Fifty chapters are incorporated in the 1952 Guide, obtainable from ASHVE headquarters, 62 Worth St., New York 13, N. Y. Price: $7.50 each.

Handbook for hot water Heating and Distribution

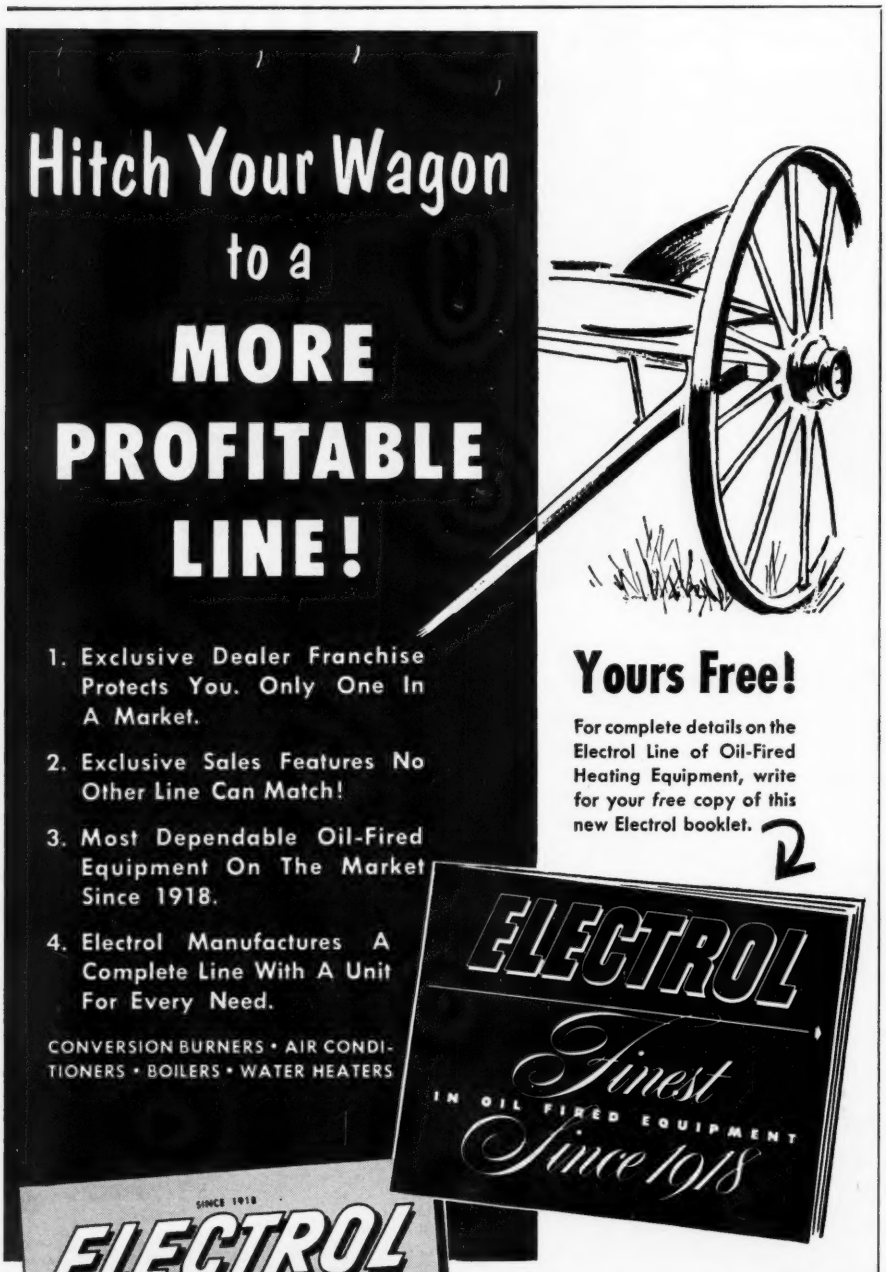
HOT WATER SUPPLY by William Hutton and Wendell M. Dillon, director of engineering, Watts Regulator Co., Lawrence, Mass., has been written as a handbook of useful tables of requirements and performance, methods of installation and data on hot water heating and distribution.

It incorporates information on the selection, construction, installation and maintenance of hot water heating appliances used for domestic service and commercial purposes, aimed at securing more efficient operation, safety and long service. The principles of construction and performance of water heating and distributing systems are concisely reviewed, along with the effect of qualities in water on appliances and piping at various temperatures, safety and control devices.

Twenty-four chapters are illustrated with representative makes of heaters and accessories; 18 tables have been compiled from practical data furnished by manufacturers, research laboratories and engineering societies.

The text begins with explanation of common terms used, follows with discussions of types of heaters, direct and indirect, figuring requirements, installation procedures and control applications.

Published by Plumbing and Heating Journal, New York, N. Y. Board covers, 5" by 7½", 120 pages, price $3.00.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Design of the industrial Installation

COMMERCIAL & INDUSTRIAL oilburning

Part IX—Limit and water-level Controls, motor Starters, automatic Valves

by

Kalman Steiner*

LAST MONTH'S ARTICLE considered the primary control, which determines the types of control system. This article will discuss the various types of switches used in the control network, regardless of the type of system. These switches function from some change in temperature, pressure, liquid level, or some similar characteristic affecting the building or its equipment. This article will also treat of the automatic valves used with industrial oilburners.

Limit Controls

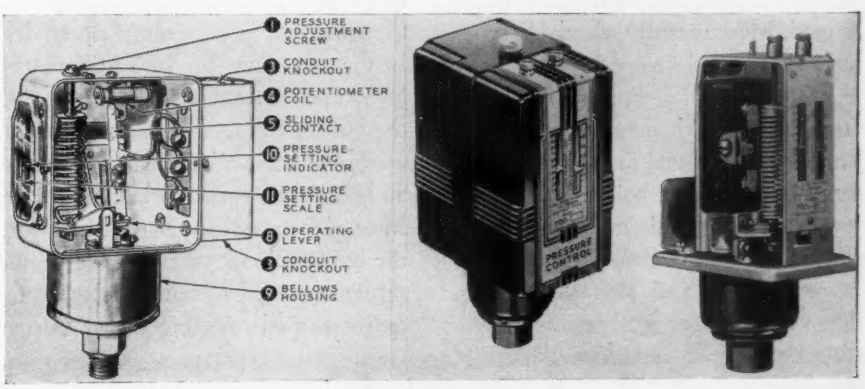
The steam pressure switch, often referred to as a pressurestat,** as used with industrial oilburners, is essentially the same instrument as employed with domestic burners on steam boilers. It is merely a matter of selecting a switch suited to the pressure range to which the instrument will be exposed. An important point to bear in mind is the selection of only high pressure types even where one switch is intended for holding low pressure at night on a high pressure process job. During the day, with the low pressure switch shunted out of the control circuit, the switch itself still must withstand the higher pressure that will prevail.

Instead of mounting the pressure controls on the boiler, alongside the pressure gauge, many dealers prefer to mount them on the wall panel along with the other switch gear, running a ¼" pipe or copper tubing to connect the water column with the pressurestat. When so doing, the dealer must allow for the pressure that will be exerted downward as soon as the connecting pipe or tube fills with condensate (0.433 psi for each vertical foot of water, regardless of the pipe diameter.)

Occasionally a job comes along requiring boiler pressures beyond the range of conventional pressure controls, which are available in standard types up to 300 psi. For higher pressures, control can be accomplished by using boiler temperature instead of pressure, inserting a remote bulb into the boiler below water line where it will respond to changes in boiler-water temperature. Unless the boiler incorporates a steam superheater, the steam temperature and water temperature follow each other very closely, and for any desired steam pressure there is a corresponding temperature. The temperature of saturated steam at 365 psi, for example, is about 440°F.

For governing temperature in hot water boilers and hot water tanks, the immersion temperature switch comes in a variety of forms. The usual arrangement, often referred to as aquastat, employs a well screwed into a tapping in the boiler, the tank, or a tee in the circulating line, the well then receiving a helix that is attached directly to the switching mechanism. In another form, the thermostatic element is clamped against the hot surface of boiler, tank, or pipe, as in the surface aquastat. A third form has a remote bulb, which is inserted into the water system and connected to the switch by means of a small diameter copper tubing known as capillary tubing. Changes in pressure within the closed, liquid filled system comprising bulb, tubing and switch cause the switch to trip in accordance with changes in water temperature.

In the so-called summer-winter hookup embodying forced circulation hot water to the radiators and another circulator sending hot boiler water to the heat exchanger that produces the service (faucet) hot water, it is well to have an aquastat (so called reverse acting) hold open the circuit to the radiator circulator until boiler water is above the minimum required to provide service hot water. Thus, should the two loads (building heat and service hot water) happen to reach their peaks simultaneously, the boiler gets a chance to keep ahead of the load by holding off a portion until boiler temperature reaches a safe minimum. Usually, however, the control system brings the building up to day temperature somewhat before occupants begin drawing hot water for their morning needs.



Left: *Minneapolis-Honeywell Pressurestat.*
Right: *Exterior and interior view of Perfex steam pressure control.*

*C. Hoffberger Co., Baltimore, Md.

**Pressurestat and many other commonly used terms are actually registered trade marks, including aquastat, airstat and vacuumstat. The use of such a term in these articles is not intended to refer to a specific product, unless the manufacturer's name is mentioned.

Air temperature switches do not find as much application to industrial burners as do pressure switches and water temperature switches. But in such process applications as drying and in commercial warm air heating as is used for heating auditoriums, airstats are used. As with hot-water controls, the heat-sensitive element may be attached directly to the switching element, or it may be a remote bulb connected with capillary tubing. Again, as with water, care must be exercised to locate the temperature element in a place that will truly represent the temperature of the medium being controlled: avoid locations that are not in the path of the air stream, and avoid mountings that fail to thrust the temperature element fully into the stream. By the same token, avoid placing the bulb too close to the bonnet surface, where too high a temperature will be reflected in the bulb action.

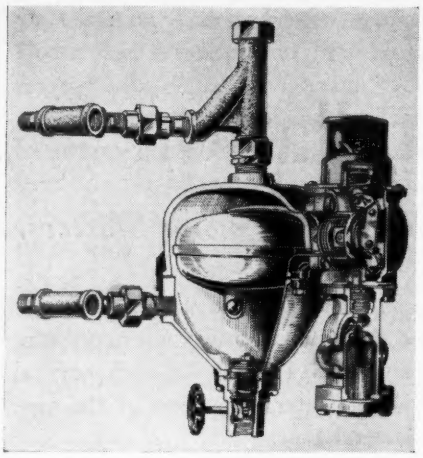
Water-level Controls

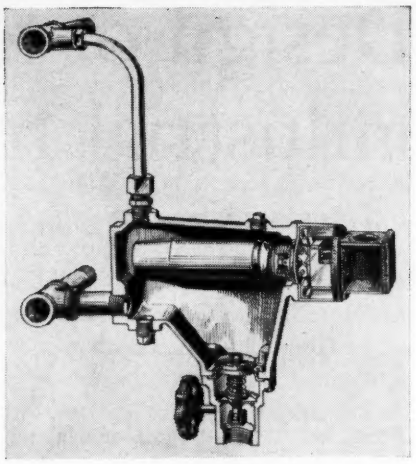
Every oilfired boiler should have protection against low-water. The practice of equipping steam boilers with low-water cutouts is fairly widely accepted and observed. The need for similar protection on hot water boilers is but recently being recognized, but protective devices for low-water conditions in such boilers are available. As with steam pressure switches, the low-water devices used must be selected to conform to the pressures that will prevail on a specific installation.

For many years the typical low-water cutoff was built as a float operated device, and that form still is widely used. More recently, electrode types have also been developed.

In the float type, piping connections from the float chamber to the boiler keep the water level in the control the same as that in the boiler. When that level falls to the minimum safe point, the float causes a switch to open the burner circuit and stop the burner. The float chamber must be flushed frequently to prevent accumulation of sediment.

In the electrode type, a set of electrodes passes a current to maintain the burner circuit closed only so long as the water level is above the same minimum. When the level falls below that, the water likewise leaves the region between electrodes, interrupting the passage of current, dropping out a relay that opens the burner circuit and stops the burner.





Left: *McDonnell & Miller combination boiler feeder and low-water cutoff.*
Right: *McDonnell & Miller low-water cutoff.*

A low-water cutout must be so mounted that when it stops the burner there is still several inches of water above the upper row of tubes. The location of the water column is not a dependable index of the water line. The only safe procedure is to open the flue doors and measure the vertical distance from the uppermost tube to floor, and then setting the cutoff line on the float chamber, or the probe chamber of electrode types, at least three inches higher.

High-pressure Boilers

On high pressure boilers the usual arrangement is a combination low-water cutout and boiler feed pump control, both switches being operated from the same float or same set of electrodes, as the case may be. In addition, the low-water cutout switch, in opening the burner circuit completes one to an alarm, which can be a light bulb or an audible device such as a bell or howler. Most cutouts will automatically restore the burner circuit when the water line returns to normal, but some types require manual resetting of the burner circuit.

An interesting situation occurs in the case of two or more boilers operating in parallel, having a common feed pump. Here an automatic feed system can be worked out by an arrangement of relays and motorized valves. Briefly, the pump-started circuit on each boiler completes a circuit to a two pole relay. When the boiler calls for water, one pole starts the feed pump; the other opens a motorized valve on the inlet to that particular boiler. Thus, the first boiler calling for water starts the pump, and the last one satisfied stops the pump. While the pump runs, only those boilers having open motorized valves will take water. The individual low-water circuits, of course, connect to the burners of the respective boilers, just as in a single boiler job.

Low-pressure Boilers

On low-pressure heating boilers, the low-water cutout can be combined with a float valve that will admit water from city pressure. These float feeders must be used with discretion. On large jobs having condensate receivers and pump, the time lag when starting up a cold boiler may permit a fair amount of condensate to accumulate in lines and receiver tank before the switch operates to return the water. Meanwhile, the float valve starts to admit water as the water line falls. Then when the pump does go into action, it sends the water line above the proper or normal level. One way to prevent this is to control the return pump from a float switch in a combination cutout and pump controller, rather than from a float switch on the receiver tank.

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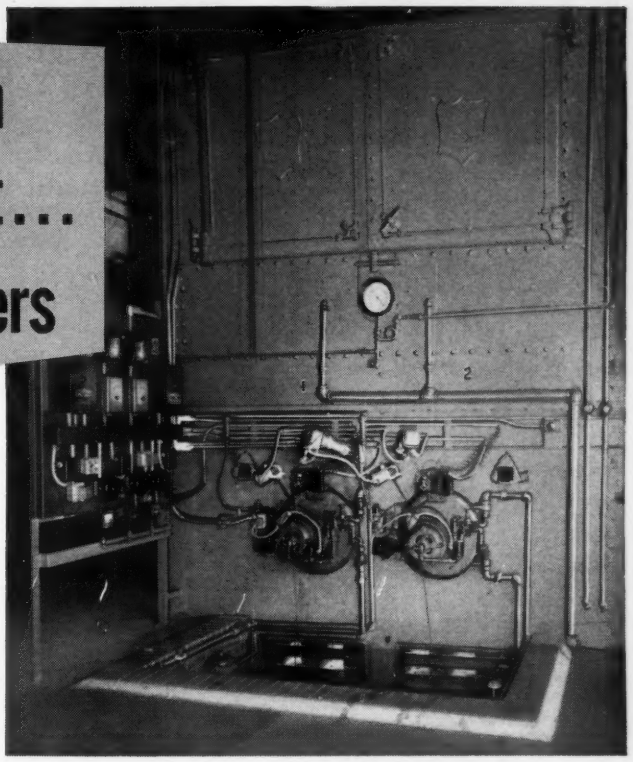

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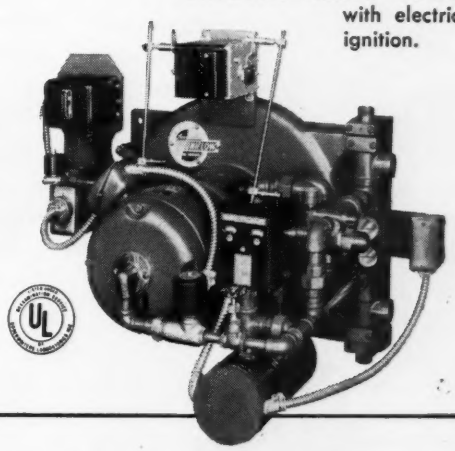

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distinct purposes. First, it permits switching on and off a motor of considerable size without having to handle full motor current in the control switch. Second, it provides overload protection for the motor. As corollaries to the first, the control circuit does not have to conform to the motor voltage and, obviously, a single pole control switch can cause the starting and stopping of a polyphase motor. Magnetic motor starters should be used on all motors larger than ¼ hp in single phase, and must be used on all polyphase motors.

Motor Starters

A magnetic motor starter has thermal relays that serve to protect the motor from overload. The thermal element must be selected in each case, to suit the motor current being handled. Should the motor draw more than normal current, the thermal relay opens the coil circuit and stops the motor by dropping out the motor contacts. In a boiler room, usually, the room temperature rises above ordinary temperatures, and so the thermal element must allow for this condition, otherwise it will interrupt burner operation unnecessarily.

Starters serve as special relays, in certain cases, in addition to their normal functions. Thus, when a job has an induced draft fan as well as an industrial oilburner, the fourth contact posts on the starter controlling the fan can be placed in the burner circuit, preventing the burner operation before the fan-motor starter pulls in. Thus, a break in the fan control circuit likewise causes instant shutdown of the burner.

Automatic Valves

Automatic valves are grouped into two classes: solenoid valves and motor operated valves. The former are widely used for governing flow of fueloil to the nozzle or atomizer and of gas to the pilot or igniting flame; the latter find their greatest application in controlling water flow and steam flow. Solenoid valves in small sizes can be applied to controlling steam (as for instance to an oil heater.) There are also other forms of automatic valve, such as the diaphragm type, but these are used principally in connection with gas burners.

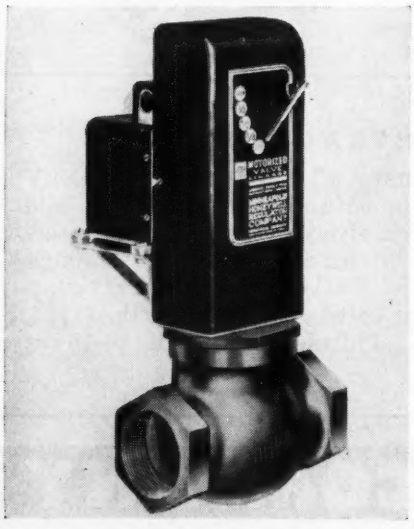
The solenoid valve is so named because a hollow coil (known as a solenoid) surrounds an iron plunger. Flow of current through the coil creates a magnetic field that causes the plunger to rise. Sometimes the plunger is itself the valve stem; in other cases the plunger is attached to a leverage system that actuates the valve stem. A solenoid valve works best when the plunger closes with the oil pressure above the seat, helping to keep the port closed. In the opposite direction, oil pressure might tend to raise the plunger when the coil is de-energized.

Many solenoid valves incorporate a by-pass port, under control of a metering valve. In oil valves, the by-pass permits carrying a minimum oil fire, as in the case of a burner where the thermostat or limit control might govern the opening of the main port under control of the solenoid-operated port for establishing the large or main flame. In gas valves, commonly used with the ignition of a rotary burner the by-pass port can permit maintaining a small constant pilot, expanding to full flame when the solenoid becomes energized. But with modern gas-electric ignition, the gas valve usually shuts off gas flow completely upon completion of the ignition cycle, the gas being again ignited, from the spark, when the burner next starts.

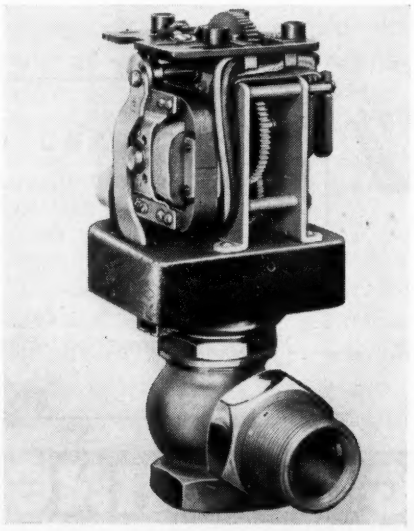
Motorized valves are standard forms of valve body, such as the gate or the globe, with a motor attached to the stem to cause opening and closing. Many control motors operate on low voltage current (about 25 volts) obtained from a transformer. The electrical circuit may be either the on and off or the modulating type. Motorized valves are widely used in zone control of heating plants, and also can be applied to controlling the flow of hot water through an oil preheater which uses circulating hot water from the main heating boiler or plant, as heating medium.

Auxiliary Devices

A convenient auxiliary device on a motorized valve consists of an electrical switch operated by the valve lifting mechanism, to accomplish switching of another circuit when the valve opens or closes. Thus, for the case described above using a motor driven boiler feed pump and motorized valves, the float switch calling for water should start the valve opening first, and the auxiliary switch should start the pump after the valve is partly open, to avoid having the pump discharge water against a closed circuit. Conversely, in closing, the valve's auxiliary switch cuts off motor current before the valve comes to full close position. Auxiliary switches have many other uses, such as controlling the burner in a zone controlled system, so that the first valve that calls for heat will start the burner, and the last valve satisfied will stop the burner.



M-H *motorized valve.*



M-H *motorized radiator valve.*

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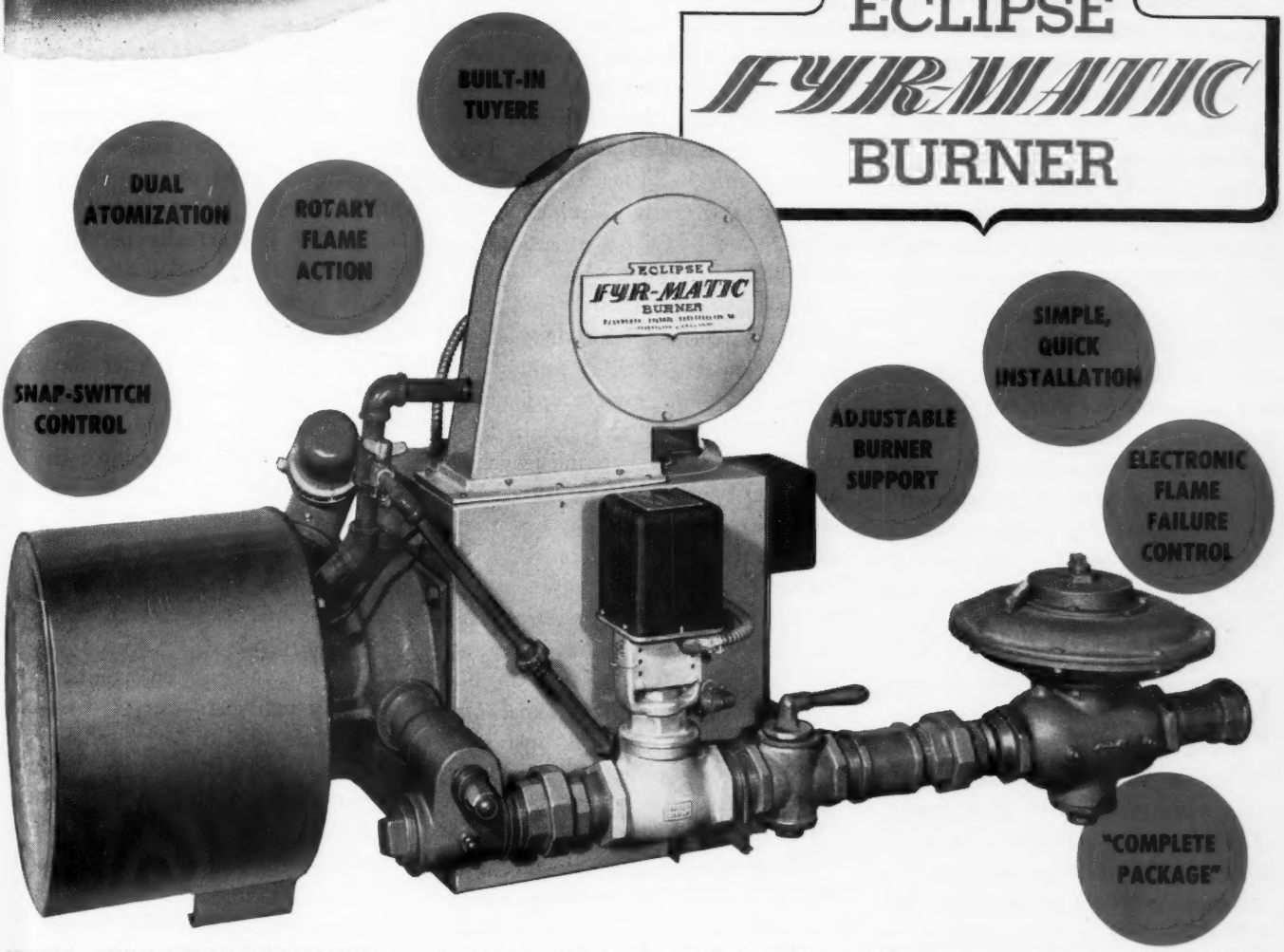

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Better Burners for worse No. 6 Oils

Rotary cup Burners, clog-free and efficient, should gain in power plant Field

by
G. W. Bohn

Exceedingly well informed on the newest problems in the field of commercial and industrial burners, the author of this provocative article gives his reasons for believing that rotary cup burners must become increasingly important in the fields of marine boilers and largest power plant boilers. He finds that steam atomizing burners and industrial pressure burners cannot be adapted to difficult-to-burn No. 6 oils without increases in oil temperature which in the end prove troublesome and expensive, but that this does not hold true for new models of rotary cup burners. The author speaks with the security of his vast experience with everyday oilburning problems, which he has gained as Vice President in Charge of Engineering, of Preferred Utilities Manufacturing Corp.

CURRENT FUELOIL STANDARDS are leading to the delivery of Nos. 5 and 6 oils which are more difficult to handle, meter, and burn properly than yesteryear oils of these grades. The rotary cup principle of atomization provides an excellent answer to the new problems of burning these difficult fueloils.

It is safe to prophesy that rotary burners with high peripheral cup speeds and high static air pressure will gain increased acceptance rapidly in the land and marine power plant fields where manually controlled burners of the steam atomizing type and mechanical-atomizing type have been used widely up to now.

Rotary cup burners employ only low oil pressures, thus have relatively large openings and orifices in their oil metering systems. Therefore, fortunately, such burners are not adversely affected by the increased percentage of sediment, gum, and other clogging elements appearing in the heaviest fueloils.

Rotary cup burners atomize heavy fueloils properly at fairly high viscosities; that is, in these burners the oils do not have to be heated greatly to insure proper atomization. For the other types of industrial burners, present day Nos. 5 and 6 oils must be heated to much higher temperatures than were required formerly. This causes coking in oil heaters, need for frequent and costly cleaning of the heaters, and additional attention for burner nozzles.

Automatic operation, gained with automatic ignition, is obtained easily and dependably with a rotary cup burner because it provides a combustible mixture of air and atomized oil close to the burner cup and traveling at a relatively low velocity. Most economical full automatic operation for large boilers depends on adjusting the firing rate automatically to match varying loads. This increases efficiencies by minimizing shut-down and start-up losses, and prolongs the life of the firebox and boiler. Capable of wide-range full automatic operation, the rotary cup burner is excellent for such applications.

In the marine field and in large power plants, the boilers are attended. Fully automatic burners of the rotary cup type, therefore, were not considered essential, and in the past steam atomizing burners and mechanical-atomizing pressure burners performed acceptably. But now increasing difficulties are being encountered on these installations because No. 6 oil has become more difficult to burn at high efficiencies and without trouble and breakdowns.

Today's No. 6 oil cannot be burned satisfactorily in many already-installed steam atomizing burners, even by using increased steam pressures and oil pressures; nor can it be burned satisfactorily by increasing the oil pressure on mechanical-atomizing burners. Switching to higher oil temperatures has not proved to be a universal answer to the problem of burning efficiently today's difficult No. 6 fueloil, although seemingly certain proponents of steam atomizing burners and mechanical-atomizing pressure burners have hoped it would be.

By way of interesting contrast, rotary cup burners not only need relatively little heating of even the most difficult-to-burn No. 6 fueloil delivered today, but actually perform at their best with the fueloil heated only to some certain temperature and not to a temperature higher than this.

Many rotary cup burner models were designed for yesteryear's easily-burned No. 6 oil, and also give trouble and low efficiencies using today's No. 6 oil, mainly because of the higher viscosity of the No. 6 oil delivered now. These burners do not have high enough peripheral cup speed and high enough primary air pressure for today's No. 6 oil.

Here are the two big points concerning a rotary cup burner designed for today's difficult No. 6 oils. First, increased peripheral cup speed compensates for these new oil's resistance to being atomized finely. Second, increased primary air pressure is needed to compensate for the increased energy in the atomized oil, leaving the cup at higher speed because of the higher peripheral speed of the cup.

Logically the rotary cup burner becomes the principal solution to the problem of burning properly today's high viscosity No. 6 oil, when you couple the above two big points to the previously mentioned characteristics of this type burner, which include clog-free operation, easy adaptability to automatic ignition, and wide range for firing rates of modulated-flame burners.

However, the typical rotary cup burner designed for yesteryear's easily-burned No. 6 oil needs redesign to enable it to handle today's difficult-to-burn No. 6 oil properly at peak effi-

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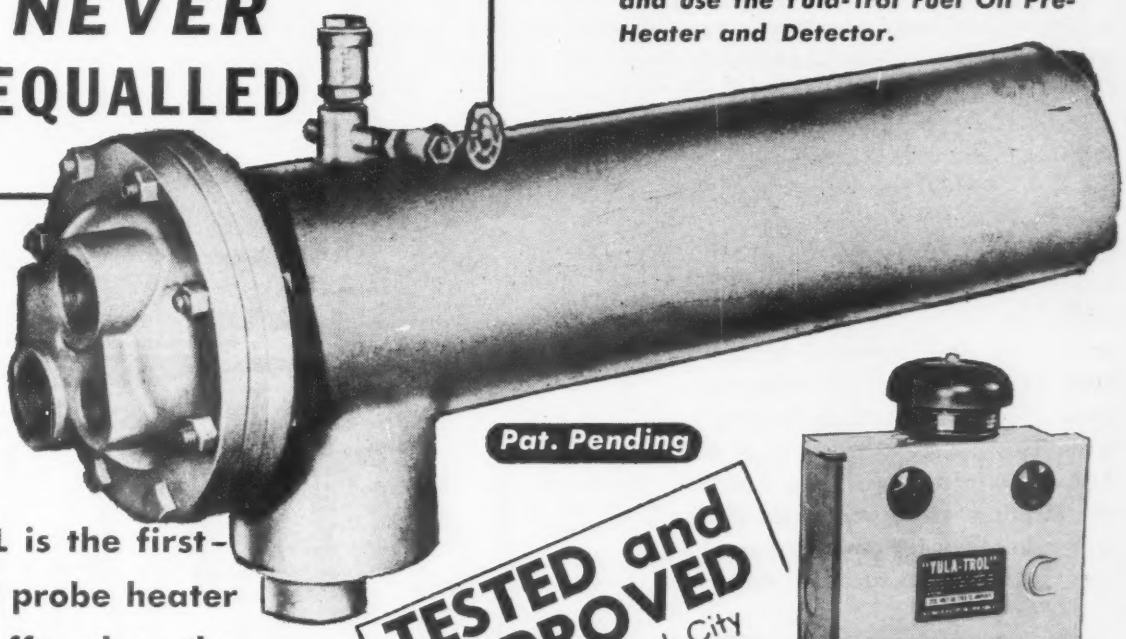

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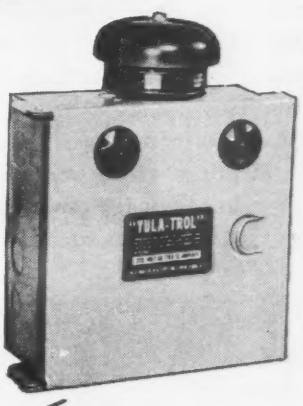

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ciency. Today's No. 6 oils call for higher peripheral cup speeds and higher primary air pressures than have been used before in rotary cup burners.

Mechanical atomizing or pressure type industrial burners, in contrast to rotary cup burners, can atomize properly only No. 6 oil which has been heated to relatively high temperatures to reduce the oil's viscosity. This holds true to a great degree also for steam atomizing burners. Being of decidedly higher viscosity than earlier No. 6 oils, today's No. 6 oils need decidedly higher preheating temperatures than have been used previously for pressure type and steam atomizing burners. Upping the oil preheating temperatures is necessary for maintaining passable efficiencies, with these types of burners. Unfortunately, however, the decidedly higher oil preheating temperatures needed for these types of burners cause the oil to be handled at temperatures closer to their coking temperatures. This causes oil heaters to plug with coke often and to need the expensive cleanings which were mentioned earlier. In addition, it causes both pressure type and steam atomizing burner tips to coke, gives frequent partial stoppage of the channels and orifices in the tips, and produces all the penalties of poor atomization.

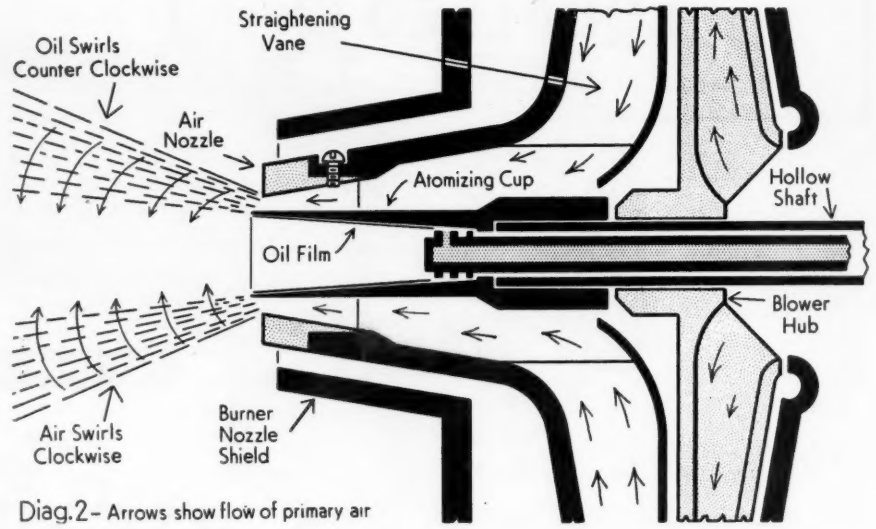
Diag. 1 shows the important parts of a horizontal rotary cup burner designed for today's high-viscosity No. 6 oils.

At the left-hand end of a belt-driven hollow shaft are the atomizing cup and the primary-air blower. Fueloil flows through a stationary tube located within the hollow shaft, and reaches the back end of the cup. The speed of the hollow shaft, primary-air blower, and cup is 4600 to 4700 rpm.

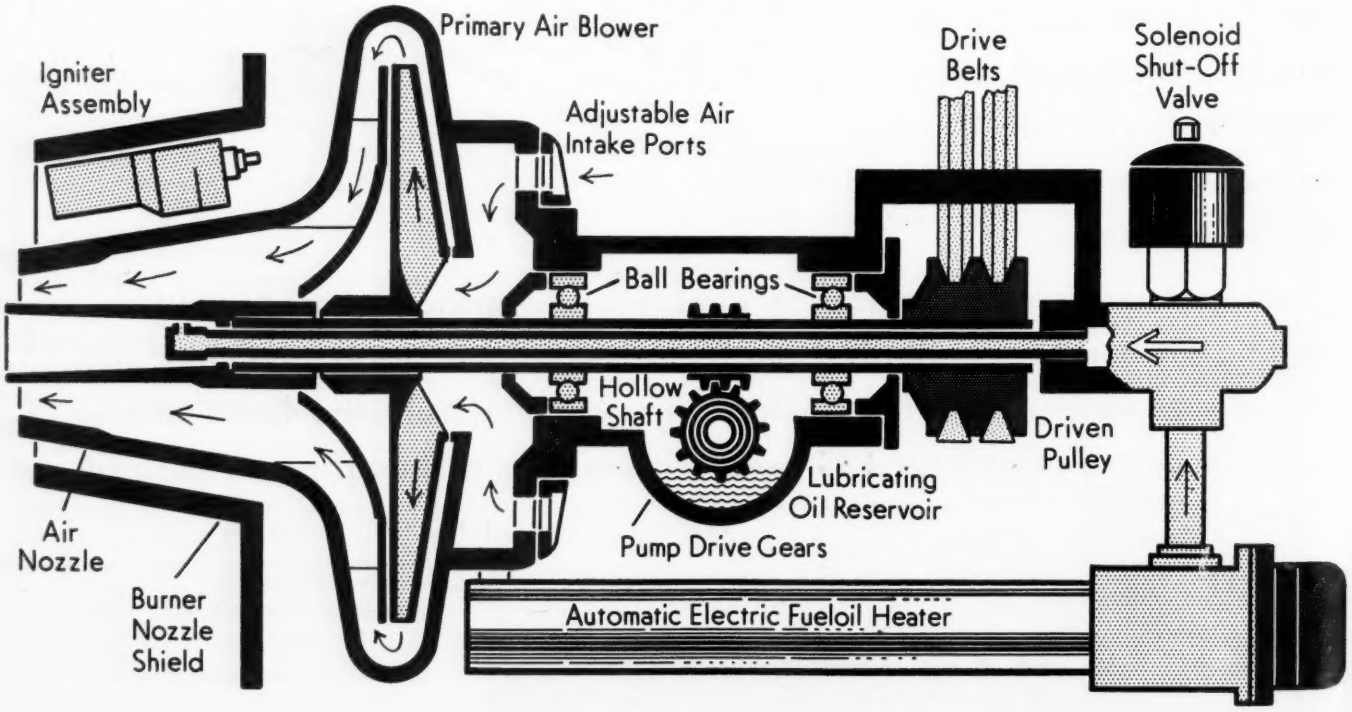
An oil droplet fed to the back end of the cup moves forward in the cup, affected of course by centrifugal force and by the increasing diameter or flare of the cup. The speed at which the oil droplet revolves gradually approaches the cup speed. The result of feeding many oil droplets continuously to the cup is that a thin film of oil, or a thread, is spun continuously off the open end of the cup. Atomization, along with final shaping of the oil spray, is completed by the force of the primary air provided by the blower.

Diag. 2 shows details of this. The

(*Please turn to page* 142)



Diag. 2 – Arrows show flow of primary air



Diag. 1 – Schematic drawing – Oil and Air Handling Parts of Preferred Rotary Burner. Motor, not shown, is located above this assembly. See belts which go to motor pulley. Arrows show primary-air flow.

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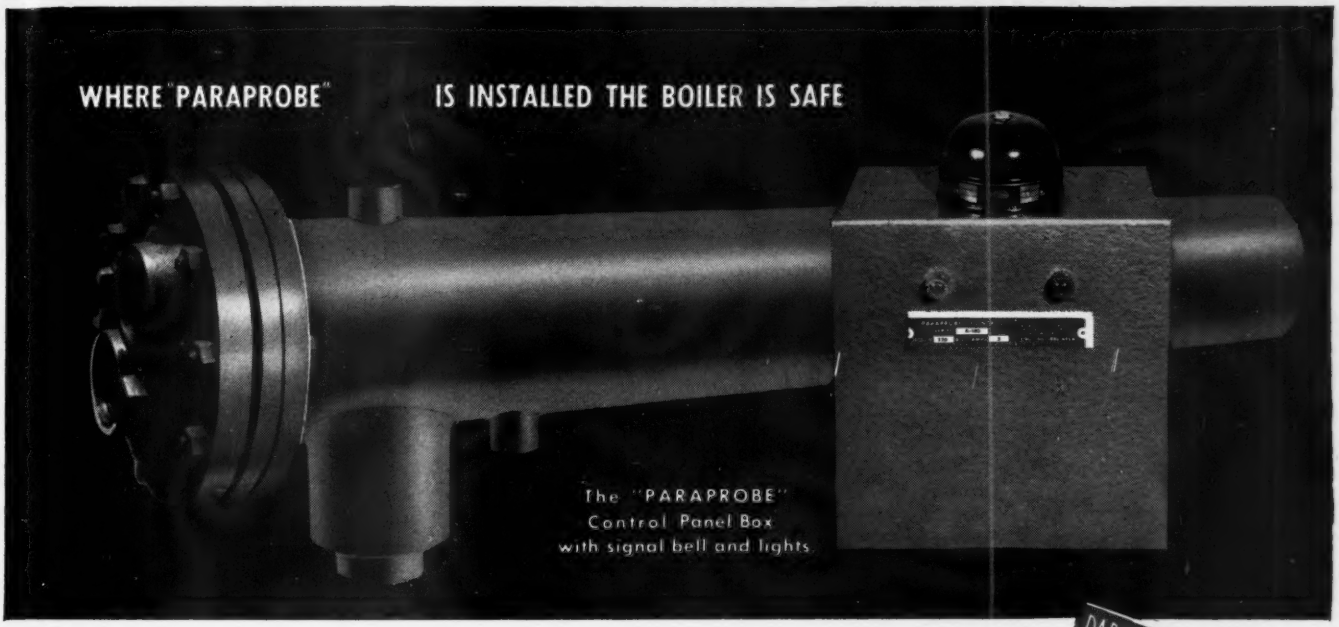

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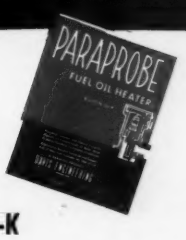

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HEAT TRANSFER EQUIPMENT

primary air influences the oil particles immediately as they leave the atomizing cup, and directs the cone of atomized oil properly into the combustion chamber. In the blower housing, the air from the blower rotates in the same direction as the blower and cup rotate. Straightening blades, cast in the blower case cover, eliminate this rotation and provide straight flow of air within the air nozzle. An "Adjustable Air Guide" then serves, moreover, to cause the air to rotate in a direction opposite to the cup rotation, and causes a greater collision effect than there would be (between the primary air and the oil film from the cup) without this feature. More thorough atomization results from this.

The primary air blower delivers but a small amount of the air needed for combustion. The balance of the required air enters the firebox through the nozzle shield and through secondary air openings in the firebox. Secondary air must be controlled.

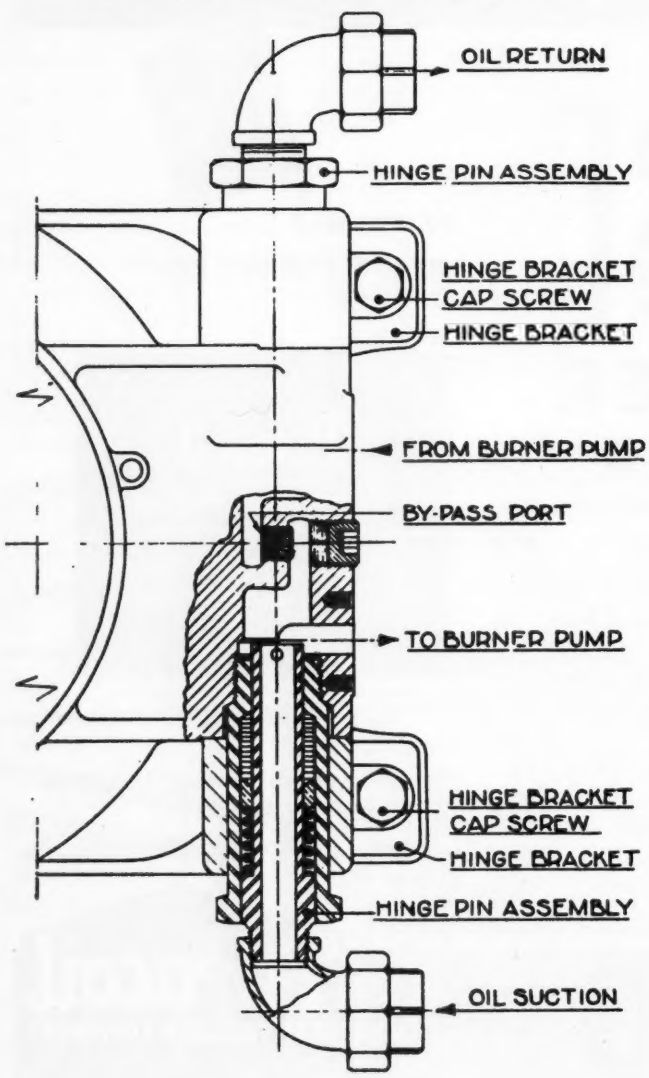
The fuel tube in the hollow shaft feeds oil to the cup without need for a stuffing box or shaft seal.

The hollow shaft in Diag. 1 has two large ball bearings, encased in a dust-tight cast-iron housing and constantly lubricated by oil stored in a large reservoir.

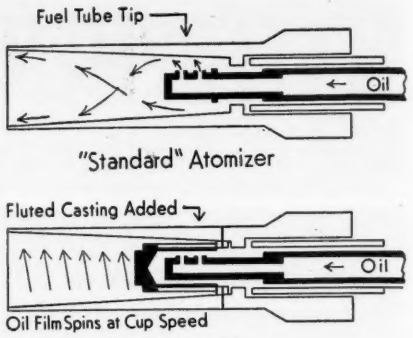
Use of a double-belt drive in this burner permits the desirably high atomizing cup speed which is important to the use of difficult-to-burn No. 6 oils, and allows use of standard-frame motors of many types, voltages, and cycles. The base to which the motor is bolted is hinged at one side and can easily and quickly be adjusted so that the proper belt tension is provided.

The burner is mounted on the hinges shown in Diag. 3, and can be swung out about 90° for inspection and cleaning of the cup and nozzle. Hinge connections are provided for the suction line and return line.

Where an auxiliary motor-pump set is used to circulate fueloil through a loop system that involves one or more burners, the hot oil may be advantageously circulated directly through the burner hinge connection. The by-pass port in Diag. 3 is used in such a system. Removing the inner hollow head plug provides a port of of size suitable for oil circulation purposes.



Diag. 3



Diag. 4

Two types of "atomizers" for the output ends of the fuel tubes are shown in Diag. 4.

An open cup atomizer should produce from its atomizing edge a thin uniformly-distributed film of oil. Fine atomization results from having this film thin and uniform around the entire edge of the cup, and throwing off the oil at high velocity. Before leaving the edge of the cup, the oil film must be revolving at cup speed. Only then will the oil have maximum velocity when thrown off the cup tangentially, and only then will the film in the cup be flattened by centrifugal force to form a perfectly uniform film within the open end of the cup. This uniform film aspect is highly important as it guarantees proper distribution of atomized oil in the primary air stream and insures uniform droplets of the smallest size possible for a particular atomizer.

Oil entering the back end of an atomizing cup must, then, be accelerated up to the speed of the cup before leaving the open end of the cup. With the oil viscous and the cup sufficiently long, this is accomplished in the "Standard" atomizer shown in Diag. 4. However, non-viscous or light oil may tend to come from the open end of this cup before it has been fully accelerated, and in that case it would lack both velocity and uniformity of distribution. Even though light, the oil would not be well atomized or mixed with the primary air.

The "distributor" type "atomizer" in Diag. 4 therefore has been provided for special cases. This consists of a fluted casting which turns with the cup. Thrown out through the fluted openings, the oil instantly is forced to rotate at cup speed. Viscosity is not used to accelerate the fuel, and the

flattening process for proper filming starts at once.

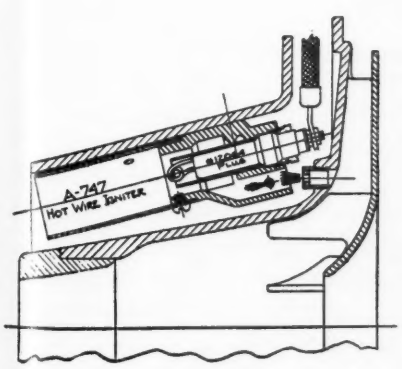
Automatic ignition for this burner is provided by a gas flame from an igniter, the gas being ignited each time the burner starts by either a hot-wire glow plug or an electric spark. Intermittent ignition conserves gas.

Using the hot-wire glow plug to light the gas pilot, a circuit to the igniter is completed before the oil valve and gas valve open, to give the hot wire time to heat to gas ignition temperature. The glow plug is made of special high-temperature wire, and obtains current from a special low-voltage transformer. After a predetermined lapse of time, solenoid gas and oil valves open and feed gas to the igniter and oil to the atomizing cup.

Different orifices are made for the gas pilot to match the characteristics of bottled, natural, manufactured, and mixed gases. The orifice must match the gas.

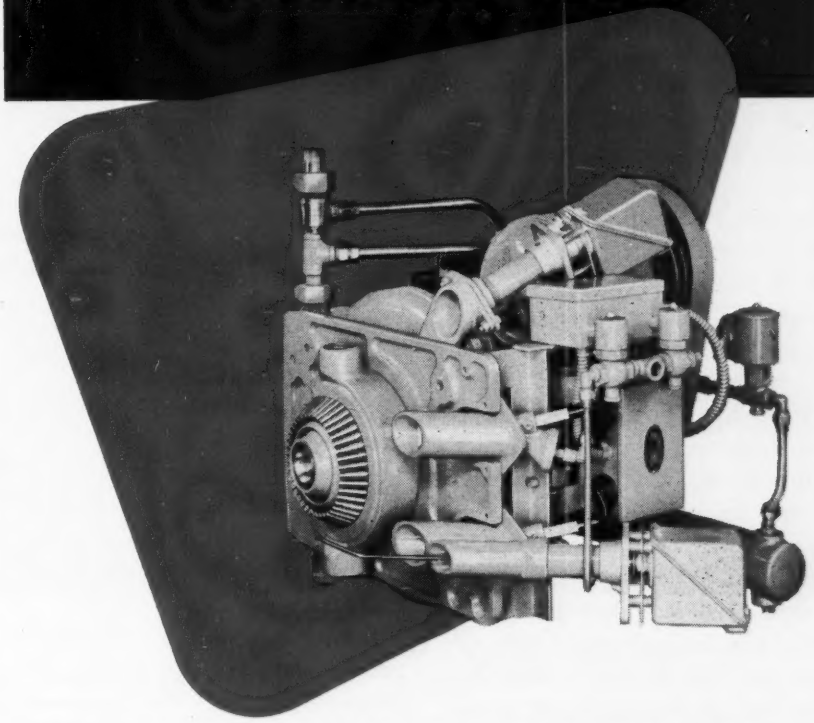
Diag. 5 shows the igniter, which is mounted directly in the burner nozzle shield (see Diag. 1) to avoid the need for a port through the refractory that forms the front of the firebox. Of the pre-mix type, the igniter contains a gas-air mixture. This assures a fast-burning, stable pilot flame thoroughly grounded within the igniter barrel, and makes the use of electronic safety controls entirely practical. The air for pre-mixing with the gas is forced into the igniter from the burner glower case. A drilled air-opening port can be enlarged easily by oversize drilling to provide additional air where this is desirable.

The "Air Guide" in Diag. 6 is simple and rugged, yet provides excellent adjustment.



Diag.5

EVERY ENTERPRISE BURNER INSTALLATION



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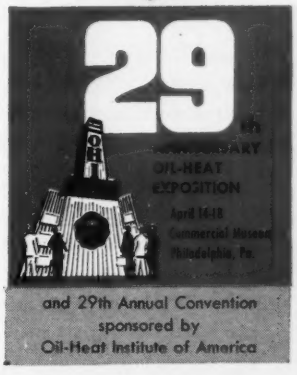

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Enterprise DEPENDABLE Oil Burners

Choice of Heating Experts

The "VoluValve" system shown in Diag. 7 is used on No. 6 oil full-automatic burners to meter the flow of oil to the cups and compensate for changes in the viscosity of the fueloil. The reservoir contains two pumps, side-by-side and driven from the hollow shaft, in Diag. 1, at slow speed through the use of a worm-drive speed-reduction gear.

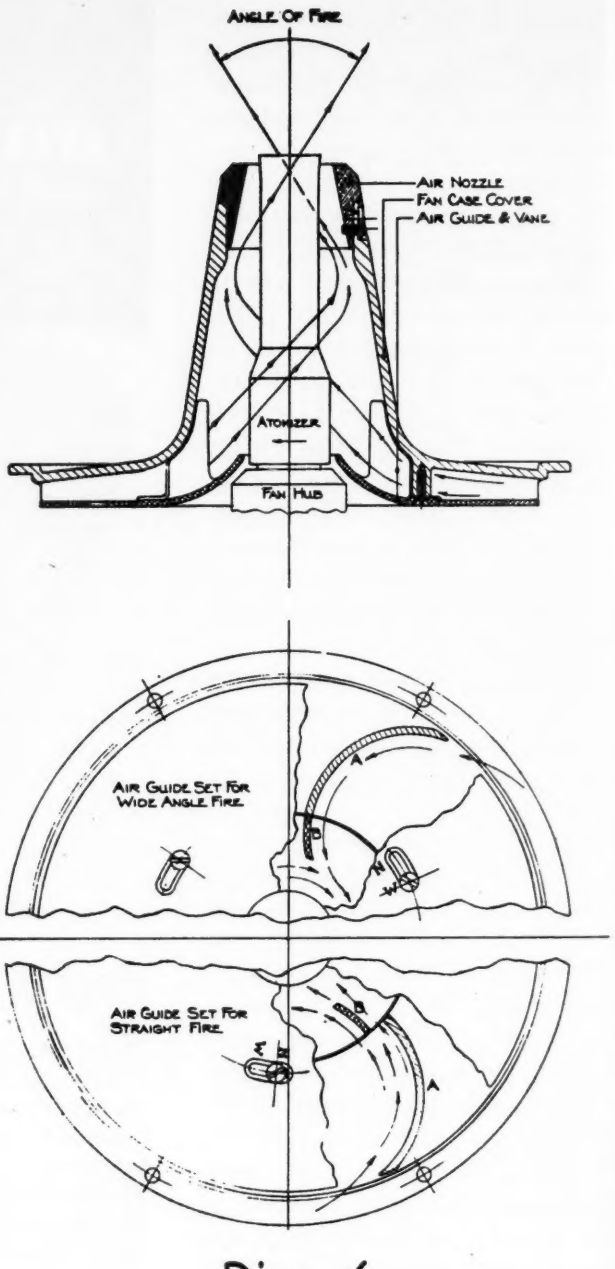
The primary pump serves only to draw oil to the burner and keep the reservoir full. It serves primarily to develop any suction line vacuum which is needed. Excess oil overflows to the return line.

The secondary pump takes oil from the reservoir and discharges it under pressure to the chamber above the reservoir. Being submerged and operating against no input-side vacuum (having its oil "handed to it" literally), this slow-speed secondary pump delivers a practically constant rate of viscous oil, regardless of changes in the viscosity of the oil caused by the delivery of different types of No. 6 oil or by varying temperature of the oil, and regardless of varying back pressure on the pump.

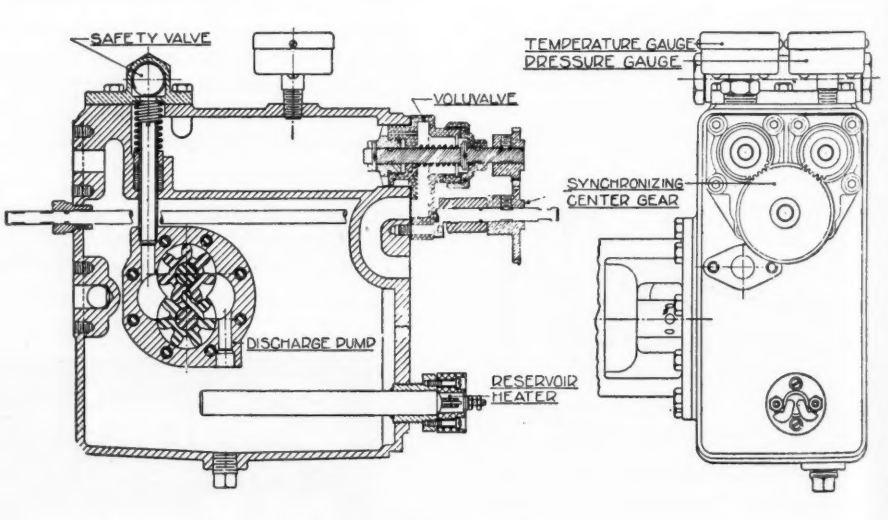
The constant flow of oil from the secondary pump then goes to the two "VoluValve" or proportioning valves shown in Diag. 7, which are identical and consist of a number of deep-drilled orifices enclosed by gates that can be rotated. With the number of uncovered orifices in each valve the same, obviously the oil delivered to the "VoluValve" by the secondary pump will divide equally between the two valves. If the number of uncovered orifices in one valve is increased while the number of uncovered orifices in the second valve is decreased, the proportioning of the oil flow between the two valves will be in exact proportion to the number of uncovered valves in each valve.

The fueloil from one "VoluValve" flows to the burner's atomizing cup. The oil from the second "VoluValve" flows back into the oil reservoir. The gates of the two valves, which can be rotated to provide the desired pressure on the secondary pump together with the desired gph firing rate, are positively geared together so that use of an adjusting device causes one gate to close a certain number of orifices while the other gate opens the identical number of orifices. Thus the desired percentage of the constant volume of oil provided by the discharge pump is fed to the atomizing cup, and the "VoluValve" provides oil always metered at precisely the desired gph rate . . . regardless of variations in the viscosity or temperature of the fueloil.

Service men, especially, should understand the following points. First the secondary pump discharges fueloil at precisely the same gph rate regardless of the viscosity of the oil. Second this oil at the constant gph rate must pass through a certain number of



Diag. 6



Diag. 7

orifices (the number of orifices provided when the fire size or gph rate of the burner is adjusted) in both "VoluValves," since all the oil discharged by the secondary pump must go through the "VoluValves." Therefore the pressure developed by the secondary pump and existing between the discharge side of this pump and the "VoluValves" will increase if the viscosity of the oil increases (or if the temperature of a certain No. 6 oil decreases); moreover this pump pressure will decrease if the viscosity of the oil decreases (as can be the result of increasing the fueloil temperature). The "VoluValve" system automatically varies the pressure on the secondary pump, at every instant providing exactly the pressure needed for the pump to feed oil to the atomizing cup oil feed system at the correct gph rate.

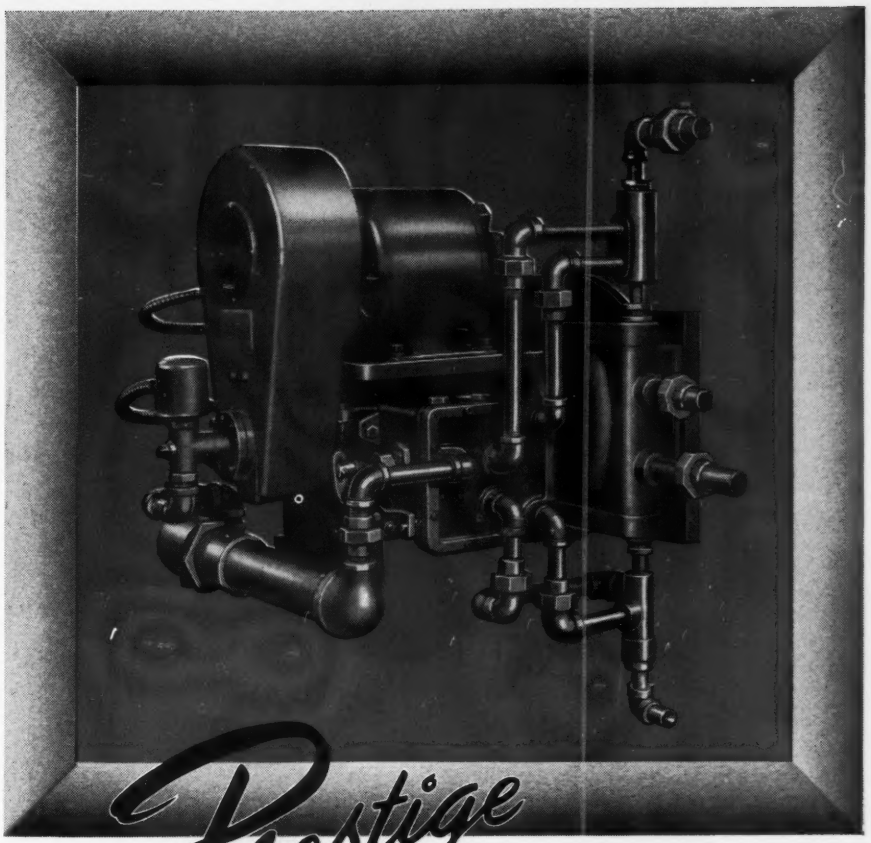
Thus the system meters viscous fueloils without the necessity of keeping constant the temperature (and effective viscosity) of the fueloil. Under all conditions of burner start-up and normal running, the gph rate is precisely what it should be whether the oil is relatively cold and therefore thick, or relatively hot and therefore thin.

The two "VoluValves" are geared together as Diag. 7 suggests for the purpose of permitting these same valves to be used as part of a high-low control system or modulated-flame control system. Simply turning the shaft of the synchronizing center gear adjusts the gph rate to the atomizing cup throughout the wide range of smallest to largest fire.

Ultimate protection against decidedly excessive back pressure on the secondary pump is provided by the safety relief valve in Diag. 7, which, at abnormally high pressures, permits oil to escape from the secondary pump discharge line to the oil reservoir.

A small low-wattage electric immersion heater is available for the reservoir. When used, this insures having in the burner at all times a quantity of warm oil for ignition and proper burning at times of cold starts.

The system has in addition the main automatic electric heater shown in Diag. 1, through which fueloil passes on its way to the hollow shaft and atomizing cup. This has one set of



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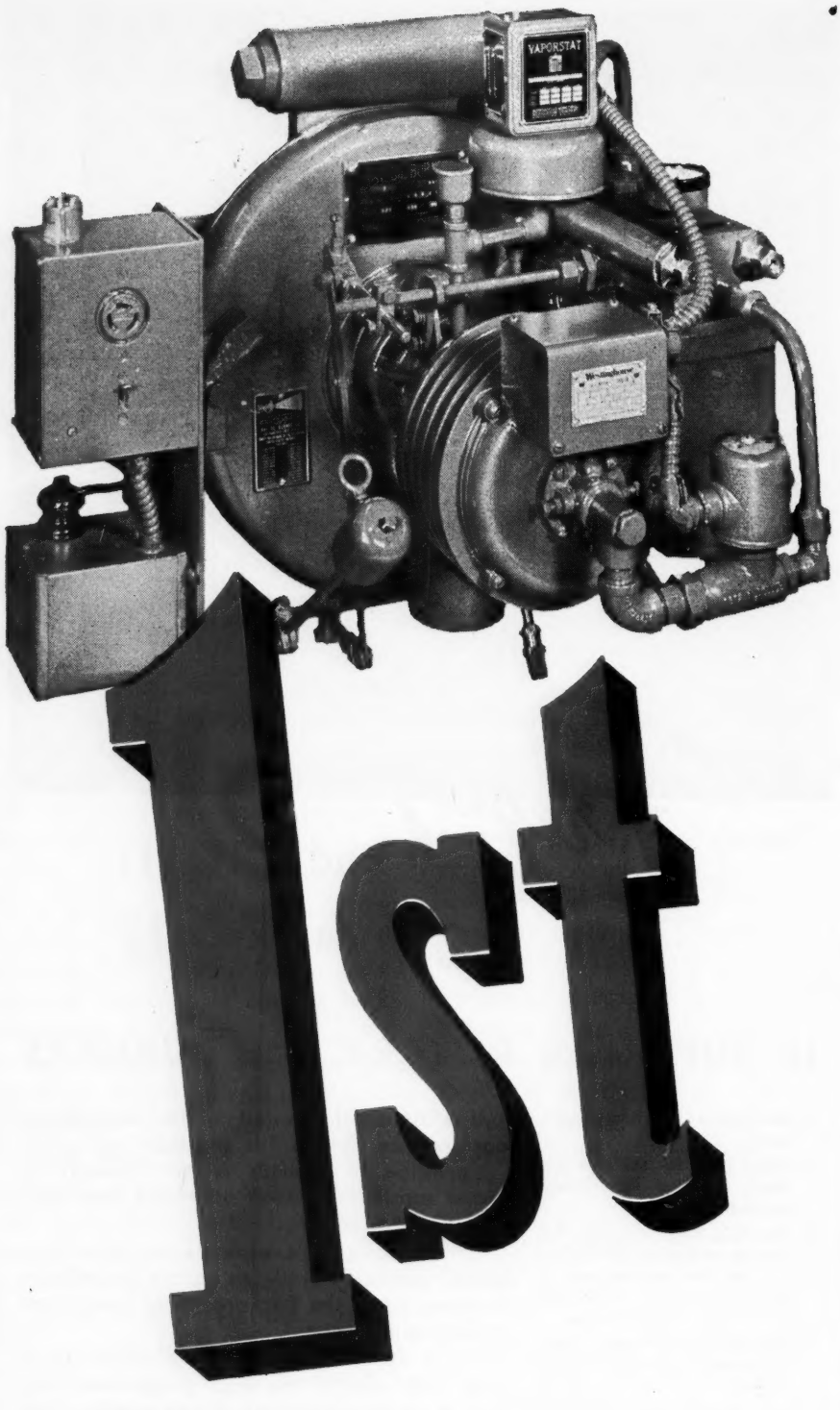
SUPERIOR ROTARY BURNERS



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thermostat contacts to control the electric heater element, and another set which is open at temperatures below about 130° and which is wired to prevent the burner starting or running when the oil in this heater is cooler than about 130°.

This burner has, then, a full complement of the devices needed for cold starts, plus the all-important system needed to meter fueloil accurately to the atomizing cup whether the oil is particularly thick or thin No. 6 oil or is particularly cold or warm. Accurate metering of the air to the flame, which is equally important to accurate metering of the fueloil, is attained through use of a nicely designed shutter in the air-inlet passage of the primary-air blower. This can be linked to the oil metering system so that the primary air is varied automatically to match the gph rates provided by adjusting the oil metering system. The linkage arrangement is used, of course, for installations having high-low or modulated flame features. Accurate control of the secondary air is also highly important, and is provided by (a) extending the linkage mentioned above so that it opens and closes a secondary air damper and (b) providing the installation with proper draft control.

Our ever-changing world has brought us in recent years certain unwelcome changes in the heavier fueloils. Yesterday's No. 6 fueloil was easy to burn at high efficiencies, compared to today's. I find a pressing need for oilburners of the commercial and industrial types engineered throughout to match today's difficult No. 6 fueloil. Having to begin with the advantages of relatively clog-free operation even when using sediment-loaded No. 6 oil, and of easy adaptability to full-automatic operation and wide-range firing, the horizontal rotary cup burner for years has been a favorite type burner among power plant specialists.

Right now, the rotary cup burner

proves to have additional advantages which are highly important to solving today's new problems. Without higher oil temperatures and pressures, it can be re-engineered to be 100% suitable for highly efficient operation using the difficult-to-burn, sediment-loaded No. 6 oils being delivered today, which are not suitable for yesterday's No. 6 oil equipment.

❖

K & M "Featherweight" pipe and block Insulation

K & M "FEATHERWEIGHT" insulation is composed of 85% basic carbonate of magnesia and at least 10% asbestos fiber, combined for maximum strength and ease of handling, plus low thermal conductivity. It is available for pipe and block insulation, both having the same composition and suitable for temperatures up to 600° F.

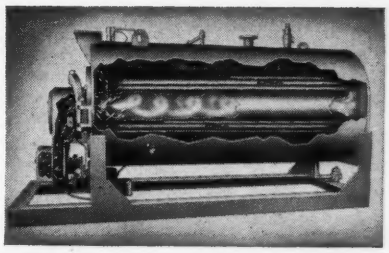
Pipe insulation is furnished in 3 ft. sections in sizes from ½" to 10". Thicknesses available are standard, 1½" and 2", 2½" in 2-layer construction up to 8" size and 3" in 2-layer construction up to 7" size. The insulation is furnished with canvas jacket and 2½ brass lacquered bands per section.

Block insulation, for use on flat, curved and irregular surfaces such as boilers, tanks and similar applications, is available in 36" lengths, 3", 6", 9" and 12" widths. Thicknesses range from 1" to 4", inclusive. Curved blocks or lagging are generally furnished 6" wide, 36" long and 1½" or more in thickness. For temperatures in excess of 600° F., the blocks are used in combination with Hy-Temp blocks up to 1900° F.

Made by: Keasbey & Mattison Co., Ambler, Pa.

Continental steam Generators feature 2-pass Construction

CONTINENTAL STEAM GENERATORS, 2-pass versions of the Scotch Marine type boiler, are fully automatic and self-contained. Units, available in sizes from 10 to 500 hp, 15 to 200 lbs. operating pressures, are ready to operate when service connections have been made, and can be used with heavy or light fueloil, gas or a combination.



All fuel is burned in the water-surrounded boiler furnace, the gases passing spirally through large 3" tubes. The 2-pass construction eliminates refractory, except at the back of the boiler. Front and back of the unit can be opened in 15 or 20 minutes to provide access for interior cleaning and servicing. A dry pipe in the boiler removes condensate from the steam to keep down moisture content, but the steam tends to remain dry since a constant water level is maintained automatically and the steam area stays uniform. Burner and fan drive is a standard motor with low horsepower requirements and the fan is a forced draft type.

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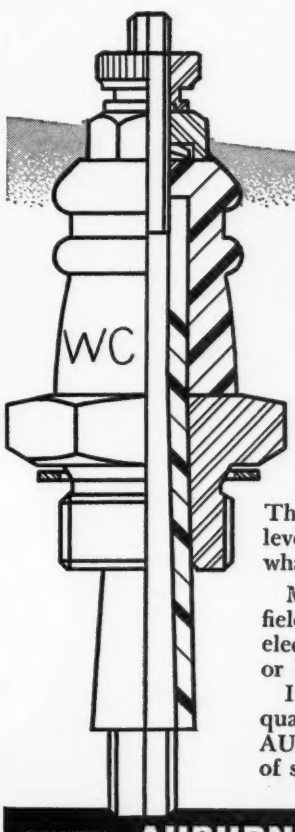

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COMMERCIAL & INDUSTRIAL oilburning

Selling industrial Burners requires thorough Training

by
A. A. Abrahams*

A GREAT DEAL has been said in these columns regarding brickwork, installation of tanks and piping, heaters, pumps, etc. as applied to oilburners using No. 5 or No. 6 fueloil. These articles have been very interesting and instructive. However, I believe we should say something about selling these burners and keeping them sold to the satisfaction of the customer. If we spend a few minutes to ponder the question of the type of men we must employ to sell the job, we will be rewarded in knowing that those of us who must plan and install the equipment can do so without fearing that the customer may find fault due to the fact he has been misinformed by salesmen who do not know how to sell heavy oilburner equipment.

The selling of heavy oilburners is quite different from that of light oilburners. After 28 years in the selling, installation and manufacturing end of the commercial and industrial oilburner business, I am fully convinced that in order to sell this type of equipment the salesman must be an engineer. He does not necessarily have to be a college graduate, but he must be familiar with boilers, combustion, installation, operation and servicing of oilburners designed to burn the heavier grades of fueloil.

I recently had a very interesting conversation with a dealer selling light oilburners. He was of the opinion that it didn't make any difference whether a man sold light or heavy oilburners. He must be a good salesman, but not necessarily too familiar with the application of the equipment he was selling. He felt that as long as the dealer knew how to install the equipment, the salesman need not worry about anything except getting the order. This presumption may work out with light oilburners, but not with heavy oilburners, although I do not believe this logic will work with either one.

Usually the salesman must sell heavy oilburners to consulting engineers or engineers in plants familiar with heating. Therefore, the salesman must know at least as much or more about his product and its application to the

*Vice-president, Federal Oil Burner Co., Inc., Philadelphia 4, Pa. Graduated from the University of Pennsylvania in 1917 with the degree of Bachelor of Science in Electrical Engineering. Associate member of the American Society of Electrical Engineers; member of the Engineers' Club of Philadelphia.

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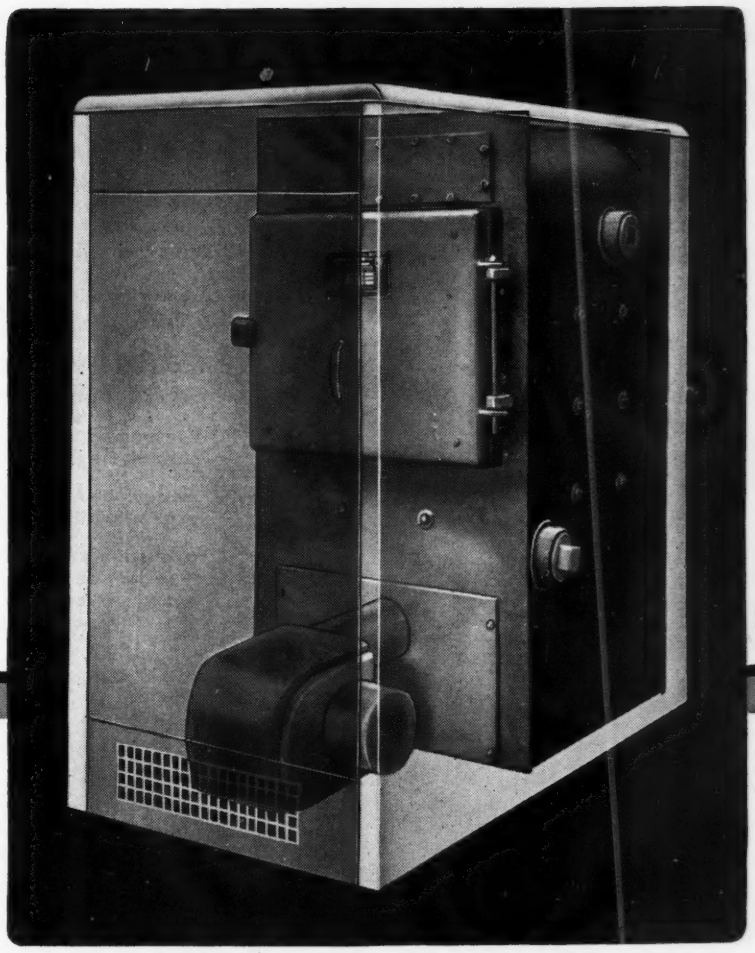

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needs of his prospect than the party he interviews.

I have seen installations designed to use Bunker "C" oil using No. 5 oil because the salesman failed to realize conditions existing in the plant which would not allow the oil to be properly heated for good operation. Many times a prospect jumps at the idea of using Bunker "C" oil because of its economy. He visions a great saving in the cost of operation, however, his dream is a mere bubble which bursts after a few weeks of trying to operate by reducing his steam pressure at night or shutting down over the weekend. He finds starting difficult in the mornings or on Mondays after his plant has been shut down for a day or two.

To burn Bunker C oil properly, the first consideration is to be sure enough heat is available at all times to properly heat the oil. The salesman must be familiar with this before he starts out to sell this type of equipment.

Many engineers specify boilers to be run at a very high rating which cannot be fired at this rating due to structural conditions, etc. Sometimes it is impossible to build combustion chambers of proper size to burn enough oil to secure these ratings. Other times draft conditions make it practically impossible to secure these high ratings. Probably at considerable expense, these conditions could be rectified, but unless the salesman knows what it is all about he will undoubtedly run into trouble by guaranteeing conditions which cannot be obtained.

I have spoken to officials of many of the larger commercial and industrial oilburner manufacturers, and they tell me that they have all kinds of trouble with their dealers because they sell their product and misrepresent results, probably not willfully, but, being overanxious to secure a contract or because they have not been properly trained to educate their salesmen. The customer will undoubtedly contact the manufacturer and blame the burner for all the trouble he has experienced.

Sell Product on Merit

It, therefore, behooves the manufacturer to see that his dealer understands the engineering features of his oilburner and its installation before he allows him to install his first job. If the dealer is wide awake he will then see that his salesmen know how to sell this product and if he can present a true picture to his prospect, he will be able to secure a price for the job which will allow a leeway to the dealer for miscellaneous items which always appear when installing heavy oilburning equipment.

Heavy oilburners should never be sold on price. Of course, there is considerable competition in this field as there is in the light oilburner market, but since so much education, time and thought enters into the installation of heavy oilburners, it is imperative that the salesman disregard price and sell his product on ultimate successful operation which is what his prospect is interested in.

I believe before a man decides to become a salesman in the heavy oilburner field he should demand an education which will allow him to compete suc-

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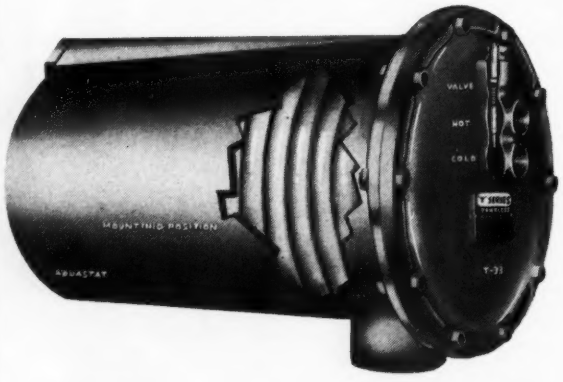

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Compare THE "T" SERIES TANKLESS FEATURES — YOU'LL AGREE TO ITS PROVEN SUPERIORITY

- built-in manual tempering valve, no by-pass hookup necessary
- less pressure drop because all-helically-wound coil has continuous smooth curvature and no soldered joints
- ⅜" copper tubing produces 20% greater heating surface and 80% less liming and clogging
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- uniformly spaced tubing is firmly supported, cannot chafe, eliminates rattles and bangs
- built-in installation features assure maximum circulation of boiler water
- compact, lifetime construction throughout
- hydrostatically triple-tested and fully guaranteed

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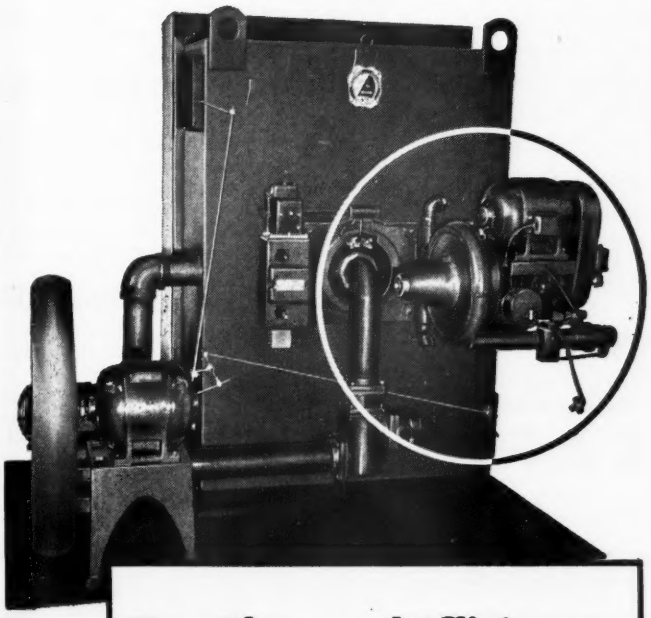
Manufacturers of: THE FAMOUS VACUUMATIC TANKLESS • DOUBLE TRANSFER OIL PREHEATERS SUBMERGED COILS FOR EVERY PURPOSE • INDUSTRIAL HEAT EXCHANGERS

NEW PREFERRED Combination Burner



Top Thermal Efficiency with Oil and Gas

Preferred brings you a *new principle* in combination oil and gas burners. For the first time two individual burners are used—the well-known Preferred Horizontal Rotary Oil Burner and the new *dual, premix* type gas burner.

You get maximum thermal efficiency . . . no matter which fuel is used. There's no compromise . . . no sacrifice of efficiency that often results when one burner is used for both fuels.

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1. Eliminate tall, unsightly and expensive stacks. All that is left is a vent on the discharge.
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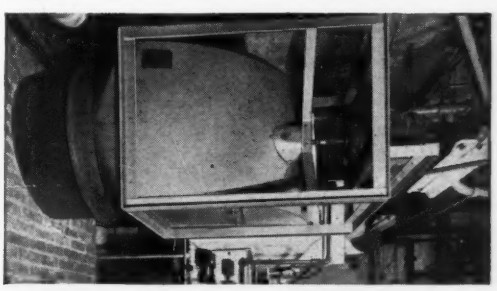

For all boilers from small commercial heating types, up to 100,000 lb./hr. steam generators.

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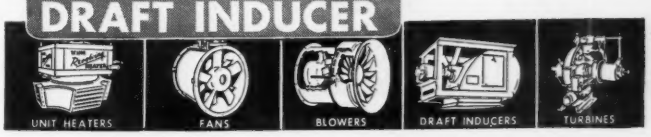

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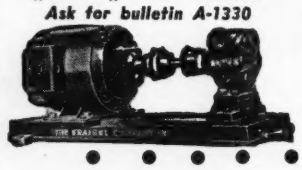

Reduction Drive for heavy oil
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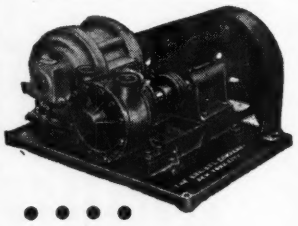

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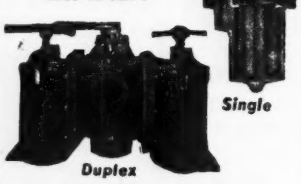

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Both light and heavy oils—tank truck and bulk station
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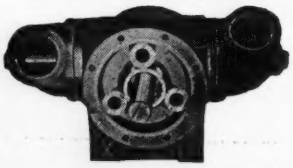

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COMMERCIAL & INDUSTRIAL oilburning

cessfully with others in the field and make him aware of the fact that he is equipped with as much knowledge as anyone in the engineering end of this business.

A fertile field in which to look for a good salesman to sell heavy oilburners is the Engineering Department of Colleges and Universities. We have literally "missed the boat" and allowed other industries to take college men away from us. I feel sure that if our industry made a concentrated attempt to bring to the attention of the students in Electrical and Mechanical Engineering, the benefits of selling heavy oilburners, we would secure a better class of salesmen and eventually raise the standards of our industry to the heights where it rightfully belongs.

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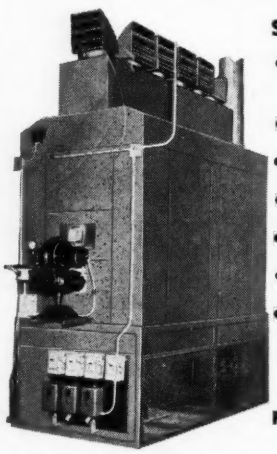

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SPECIFY and INSTALL CFE GAGES and CONTROLS
...for TOP efficiency from oil burners!

Accurate gages and automatic regulators are essential to efficient oilburner operation. CFE offers both: a complete line of controls and instruments on which you can stake your professional reputation.

CLEVELAND DRAFT GAGES

Large, easy-to-read dials—carefully calibrated, permanently pre-set. Neat, conforming cabinets. Models for over-fire and "last-pass" draft indication. Also air-pressure gages.

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Precision meter with Alnico stabilizing magnet for accurate measurement of temperature of flue gases at boiler outlet. This temperature shows the degree to which the boiler is consuming the heat generated.

CLEVELAND SMOKE INDICATOR

Electronic instrument indicating density of smoke in Ringelmann units. Can be set to operate a signal light, alarm, or smoke control equipment at any pre-determined smoke density. Lens cleaning minimized by design and integral compensating adjustment.

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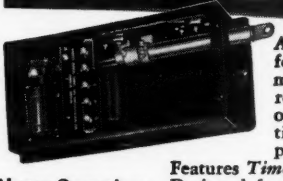

All the elements for safe, automatic, electrical remote control of boiler operation, in one compact cabinet. Features *Time Delay Relay.* Designed for use with CFE Gages and "Lectricarm" (power drive unit.) CFE controls are making savings ranging from 10% to 30% —some even higher.

Above: Open view Cleveland Damper Control. Below: Open view "Lectricarm" Power Drive Unit.

Write for 12-page, illustrated catalog and manual of oil-burning information.

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CLEAVER-BROOKS HEV-E-OIL, a gun type burner for commercial #5 oil, gas or light oil. As simple to install as a light oil burner. Let us show you on your next installation in our territory. We will send engineer at our expense to prove this, also that it gets you out of the COMPETITIVE LIGHT OIL BURNER MARKET.

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Everyday Snags

Finding Steam Plant Leaks

In any size steam heating plant, the use of excessive make-up water is an invitation to search for steam leaks and water leaks. As one of his steps to cut the fuel bills of a group of large apartment houses, a consulting engineer has installed water meters in the lines to the automatic boiler feeders. Reading the meters once a week to start out, he will learn quickly which of the heating plants are the big offenders in taking too much make-up water. Following his usual practice, he will have the meters read only once every month or once every two months, once he has corrected any shortcomings that caused the boilers to take excessive make-up water at the start.

This engineer's method for starting to locate causes for taking excessive make-up water is to raise about 13 lbs. pressure on the boiler and heating system, shutting off sections of radiation if necessary for this and testing these sections later while other sections, tested earlier, are shut off.

With the 13 lbs. pressure on the system, he searches it thoroughly for water leaks and steam leaks. Radiator shut-off valves often leak. Old packless valves need new parts, and packed valves need taking-up or new packing. Vent valves are big offenders in old one-pipe steam plants; failing to close tightly when steam reaches them, they permit great amounts of steam to escape. Thermostatic traps are big offenders in two-pipe steam plants; failing to close when they should, they fill dry return lines with steam and cause

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...SHOW BIG FUEL OIL USERS (6,000 GALS. OR MORE PER YEAR) HOW TO CUT COSTS AS MUCH AS 20% TO 30%...

It's just as easy to sell a "big-ticket" item — quality equipment at a quality price with a "king-size" profit. In fact, you can cash-in better and with no additional overhead than in the crowded highly competitive light-oil burner field. Big fuel users today are looking for burners that will enable them to use low-cost, high-heat value fuel oils up to and including No. 5 oil.

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The Cleaver-Brooks HEV-E-OIL Burner, efficiently using the heavier, less expensive commercial No. 5 oils, instead of light oils costing 20% to 30% more. Hundreds of satisfied owners report big savings, costs cut as much as 20% — 30%. It's a selling "natural" in these days of high and rising costs.

PACKED WITH REAL SELLING POWER

the product of a nationally known manufacturer of oil combustion equipment — quality equipment that sells at a quality price — with a king-size profit for you. HEV-E-OIL features:

- Burns low-cost No. 5 oil
- Automatic all-electric ignition — no expensive gas pilots required
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- Automatic pressure lubrication.
- High efficiency through accurately measured oil and air flow

PLANNED PROMOTION MATERIAL...

includes display, decals, newspaper advertisements, folders, mailing pieces and selling manual.

Write today — for all the facts and figures on HEV-E-OIL Burners

HEV-E-OIL BURNER DIVISION
CLEAVER-BROOKS COMPANY
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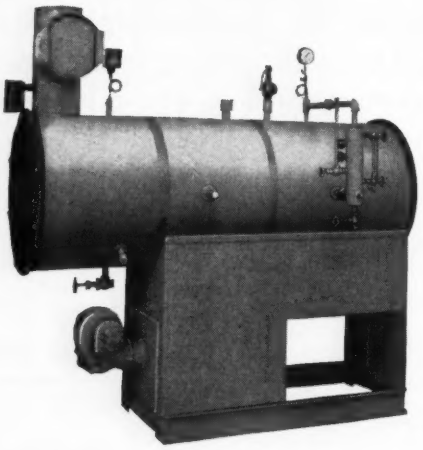

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COMMERCIAL & INDUSTRIAL oilburning

. . . . Everyday Snags

steam to blow out of boiler room air vents and condensate receivers.

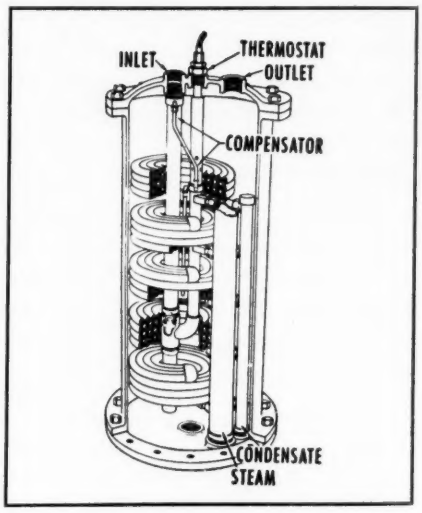
Bad leaks that can't be discovered by this method of raising 13 lbs. steam are often in buried or hidden return lines. Rusted-through buried return lines and broken fittings in such lines can cause a boiler to take hundreds of gallons of water a day.

If you don't want to be thorough enough to install a water meter in the feed water line on a job that has the automatic water feeder it should have, you can use another idea of this consulting engineer. Turn off the automatic water feeder for a day or two, watch the boiler water line very closely, and feed water to the boiler by using a hand valve. That will show you if, for example, the boiler waterline drops six inches in eight hours and if, as a result, tremendous amounts of make-up water are needed for the system. If you use this idea, be exceedingly careful two ways. First, make dead-sure beforehand that the boiler has a low-water control that works! Try out the control several times by lowering the waterline and finding out if the burner stops. Second, make certain to open the proper valves when you finish your test, so that you'll put the automatic water feeder back to use again.

❖

Aerco heat Exchanger has internal Compensator

AERCO heat exchangers are hot water generators that feature an internal compensator for extreme variations in temperature and flow rates. The temperature regulator bulb is located in the water space inside the heater, but not directly in the path of hot water discharge and activates the thermostatic element by changing the temperature of water surrounding it without ap-



Solve Bulk Tank Preheating!!!

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"Hot-Spot" PREHEATER

Heats heavy oils in bulk storage to proper flow temperature before they enter the suction line —takes load off suction pumps. Heating medium — steam or hot water. Construction — all steel — connections for any diameter tank.

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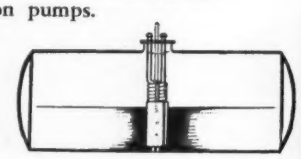

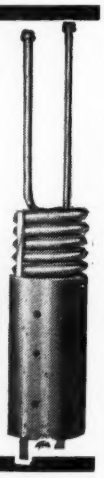

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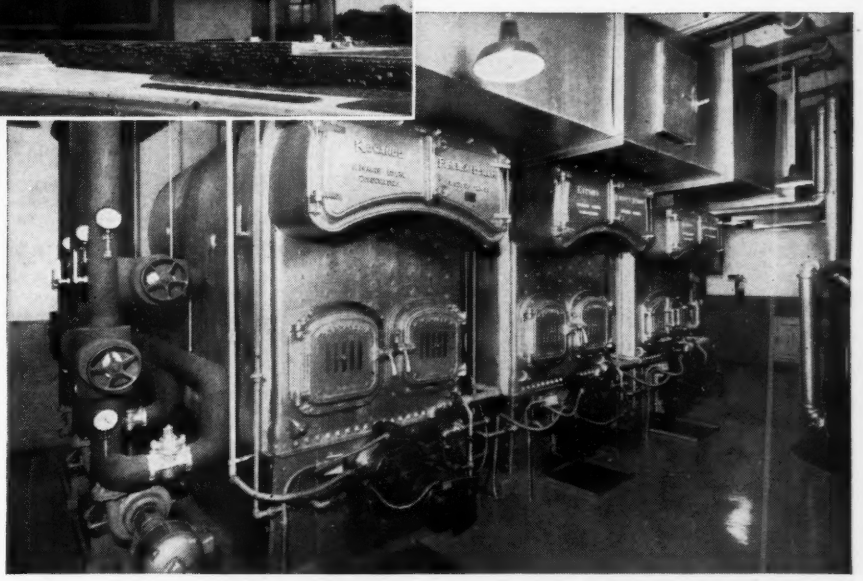

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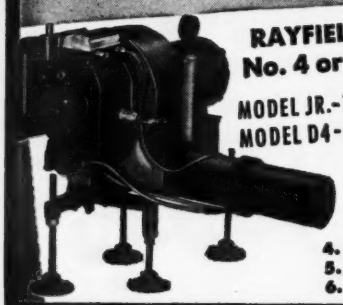

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preciably affecting the outlet water temperature.

The hot water generators consist of a shell with top and bottom covers, steam coils and risers and the compensator assembly. Coils are free-standing and with the removal of the outer shell all the coiled tubular units are exposed. Cold water enters at the top of the shell, flows downward through the cold water feed pipe of the compensator assembly into the bottom of the shell and then upward past the coils to the water outlet at the top. Steam enters at the bottom of the shell, upward through the vertical steam riser and then through the coiled tubular units.

The compensator acts instantly when any water is drawn off and controls to within two degrees on intermittent loads and within half a degree on continuous loads. On large installations Aerco may be used as a combination booster and temperature control in series with storage tanks, or shell and tube exchangers. No other temperature control is required on the system. Standard units are made for capacities from 5 gpm to 300 gpm, temperature rises from 5 to 150° F.

Made by: Aerco Corp., 214 Lafayette Pl., Englewood, N. J.

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PRAT-DANIEL CORP., South Norwalk, Conn., is offering a new eight page, illustrated, bulletin describing the design features of their new forced draft fans. Bulletin 300 shows varied types of fan wheels, designed with precisely shaped blades, which permit an almost perfect flow of air from both leading and trailing edges.

PREFERRED
Anti-Syphon Valves

PR-194

APPROVED BY
UNDERWRITERS' LABORATORIES, INC.

Permits pumping of oil but closes to prevent syphoning in case of suction line break.

FOR OILS UP TO No. 5
Valves C5 and C10 are available in ⅜" and ½" sizes.

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Valves B5 and B10 are available in ¾" and 1" sizes. (1" size is built up from ¾" size with fittings.)

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Valve A is available in 1¼", 1½" and 2" sizes for 5 or 10-foot head pressures.

You can be sure of the best when you order from Preferred, the oldest and the largest manufacturer of anti-syphon valves.

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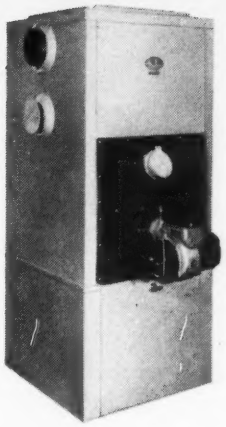
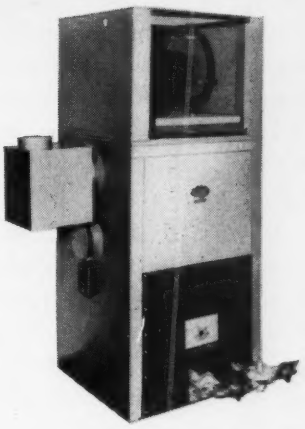
Halco DU-ALL



GAS OR OIL
HI-BOY
ASSEMBLY

GAS OR OIL
COUNTER-FLO
ASSEMBLY



ONE FURNACE INSTALLED 7 *different ways*

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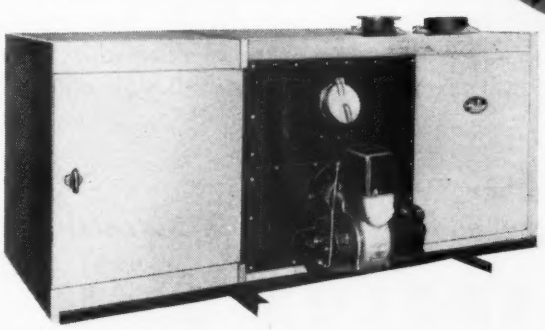
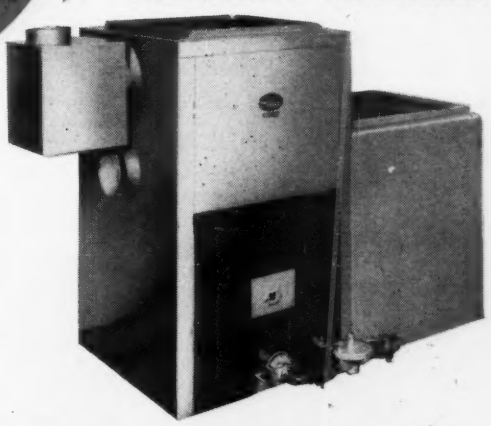
OIL FIRED ONLY



GAS OR OIL
BASEMENT ASSEMBLY



THE Halco DU-ALL

Now available . . . the Halco DU-ALL . . . ONE furnace for every heating job. It's a Hi-Boy . . . a Low-Boy . . . a Counter-flo . . . for gas or oil . . . or a horizontal unit for oil. ONE unit, with two interchangeable burners, one for gas and one for oil, may be assembled in SEVEN different ways.

ALL GAS FIRED ASSEMBLIES APPROVED BY AGA

AMAZINGLY EFFICIENT

The capacity of the Halco DU-ALL is 120,000 BTU *bonnet delivery* with either gas or oil. It is easily serviced, quickly assembled and . . . there has been no sacrifice in efficiency to achieve this amazing versatility.

Reduce Your Inventory

Instead of stocking SEVEN furnaces you stock ONE Halco DU-ALL plus one gas and one oil burner. The Halco DU-ALL Burner Exchange Plan adds to your profits. It's a NEW, Revolutionary "DU-ALL" furnace. ORDER YOURS TODAY!

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HALL-NEAL FURNACE CO.

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Iowa Farmers indicate their buying Intentions

LAST SEPTEMBER Wallaces' Farmer and Iowa Homestead wrote to 1,500 Iowa farmers and asked them what building they would do and what equipment they would buy in 1952. The names were selected from the magazine's mailing list at random to insure a complete cross-section of Iowa subscribers. Returns then were projected on the basis of the total of 203,159 farms in the state.

A total of 10,361 indicated they would purchase oilburners this year, 8,939 intend to buy oilfired room or space heaters and 2,641 are going to acquire oilfired water heaters for their homes. Another 1,219 will purchase oilfired water heaters for use in milk houses.

In answer to questions about equipment competitive with oil 2,641 farmers replied they would buy gasburners in 1952 and 4,063 intend to install stokers. Electric water heaters were selected by 17,472 for house use, 5,892 for milk house use. Gasfired water heaters will be added in 4,876 homes, 813 milk houses; coalfired water heaters in 203 homes, 203 milk houses. Coal-wood space heaters were marked by 1,422 farm families, electric by 1,219 and gas by 203.

❖

OPS Committee to study Gulf-East fueloil Prices

OFFICE OF PRICE STABILIZATION has named a 19-man East Coast advisory committee to meet in Washington, D. C., to discuss kerosene and heating oil price ceilings as part of the study being made of the Gulf-East Coast price structure.

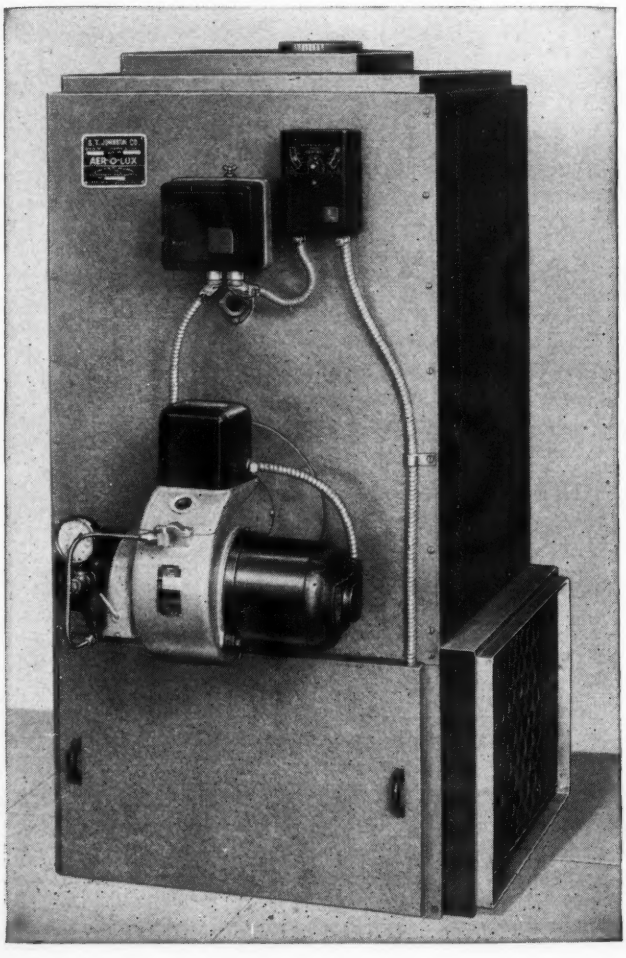
Members named were: E. H. Collins, Esso; R. M. Bartlett, Gulf; W. C. Burns, Hartol; Wiley Butler, Coastal; W. E. Downing, State Fuel; J. M. Gardiner, Republic; Fred Gilbert, Patchogue Terminal; Leon Hess; K. T. Howe, Jenney; J. J. Kelley, Cities Service; C. F. MacGoughran, Sinclair; J. L. Minner, Shell; Henry L. Schwartz, Paragon; A. W. Stearns, Texaco; F. F. Sweeton, Royal Petroleum; W. G. Violette, Kentucky Standard; R. M. Wilkinson, Socony-Vacuum; Edward M. Toby, Jr., American Mineral Spirits and J. J. Mulvey, Atlantic.

❖

Underwater oil Storage proposed for N.Y.C.

COL. O. R. SEAGRAVES, a Dallas oil man, has revealed plans for building a ten million dollar underwater oil storage system in New York City. *Oil Daily*, describing the project in its March 5 issue, indicated the facility would be "in excess of 1,200,000 barrels" and would include storage for more than a million barrels on the Long Island side of the East River and a 200,000 barrel underwater structure on the Manhattan side, connected by a pipeline under the river.

The two installations would be of steel, fire-walled construction and would permit tankers bringing in oil from Gulf ports and the Far East to discharge directly into underwater storage tanks, eliminating barge and truck transportation of fuel.



Another "Winner" in the line-up of Johnson Burners!

AEROLUX 65-U

. . . a super-efficient new oil-fired **WARM AIR HEATER**

This new model of Johnson's Aerolux will do an exceptionally economical job of heating homes and buildings having a heat loss of 50,000 to 65,000 BTU per hour. It is powered by the famous Johnson Bankheat Burner . . . one of the most efficient pressure-atomizing-type burners ever manufactured. Operation is completely automatic.

For installation in close quarters (even in a closet on the main floor) the Aerolux 65-U is exceptionally adaptable as it measures only 25" square on the floor and 52" high. It is listed by Underwriters Laboratories for Less than Standard Clearances and carries Commercial Standards Label CS-75. To reduce installation costs the Aerolux 65-U is completely assembled with all controls in place before shipping.

The Aerolux 65-U will be on display with other Johnson Burners in our exhibit in Booths 1049 and 1051 at the Philadelphia Exposition. We cordially invite you to inspect it there . . . or see it at your nearest Johnson Dealer.

.....Johnson Oil Burners....

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

We're on the warpath!

From now on, brother, watch our smoke!

We're building a fire under every out-of-date idea in the business — and *you're going to get the benefits!* Just listen to this program:

1. The hottest line of top-quality furnaces in the business! For instance, REGULAIRE — the greatest furnace invention in 29 years!
2. Furnace values so good people can't resist 'em. *More to come!*
3. The sweetest local co-operative advertising program you've ever heard of!

If *you're* a red-blooded furnace distributor who is smart, aggressive, and not afraid to grow — we want to meet up with you. Send us a smoke signal pronto — and we'll be out to see you by pony express!

Perfection Stove Company, 7352-B Platt Avenue, Cleveland 4, Ohio

Perfection

Superfex ▲

FURNACES

fueloil & oilheat

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

New Jersey distributor Group set Plans for May Convention

PLANS FOR THE 14TH ANNUAL CONVENTION of Fuel Oil Distributors Association of New Jersey, Newark 2, N. J., to be held on May 1 and 2 at the Berkeley-Carteret Hotel, Asbury Park, N. J., are set.

A number of guest speakers are planned for the morning and afternoon sessions. The announced subjects and speakers are:

"Wage Stabilization" — Benjamin Rothstein, Administrative Officer in charge of liaison with the Wage Stabilization Board in the New York-New Jersey region, and Joseph C. Turbett, Investigation Supervisor for the New Jersey offices, U. S. Dept. of Labor, Wage and Hour and Public Contracts Divisions.

"The Middle of the Barrel"—L. E. Ulrope, vice-president, Esso Standard Oil Co.

"The New Jersey Turnpike and Your Business" — Paul L. Troast, chairman, New Jersey Turnpike Authority.

"Retailing Fueloil"—Harry Bodine, The Tattersall Co., Trenton, N. J.

"Are You Making a Profit?"—Kirk B. Shivell, Oil Heating Marketing Counsel.

"The Challenge to Us All"—William M. Amos, Gulf Oil Corp., New York, manager, Dept. of Farm Marketing.

"General Business Conditions"—T. L. Shaffer, vice-president, Congoleum-Nairn, Inc.

The annual dinner, dance and entertainment will be held in the Crystal Terrace, Thursday evening, May 1, at the Berkeley-Carteret Hotel.

Midwest Old Timers hold winter Meeting

ABOUT FIFTY MIDWEST MEMBERS of the Old Timers' Club attended a regional winter meeting held on March 6 at Gus' Restaurant in Chicago. An enjoyable sociable gathering was highlighted by the absence of speeches and a fine sirloin steak dinner, served family style.

Charlie Bendix, regional chairman, supervised arrangements for the party and acted as Master of Ceremonies for the awarding of door prizes. Three gift certificates for Marshall Field & Co. were distributed.

IOMA to hold annual Meeting, use Pamphlets

THE 28TH ANNUAL CONVENTION of the Independent Oil Men's Association of New England will be held on June 4 at the Hotel Statler in Boston, Mass. Details of the program, speakers to appear and other activities are being readied by Donal M. Sullivan, IOMA's executive secretary.

The Association also is making use of "Mr. Therm" booklets, which use cartoon representations of a therm to acquaint consumers with the importance of using these 100,000 Btu units in figuring fuel costs.

You are cordially invited to visit our

BOOTH No. 313

at the

29TH ANNIVERSARY

OIL HEAT EXPOSITION

April 14-15-16-17-18, 1952

Commercial Museum Philadelphia, Pa.

On Display

The Bethlehem

- DYNATHERM
- CRUSADE-A-THERM
- CONVERSION BURNERS
- WARM AIR FURNACES

A few exclusive BETHLEHEM territory Franchises are still available. Wire or write immediately for full information.

BETHLEHEM FOUNDRY & MACHINE COMPANY

BETHLEHEM, PENNSYLVANIA

"Oil and Gas" Symposium scheduled for May 16

AN "OIL AND GAS" SYMPOSIUM will be held at the School of Law, University of Kansas City, Kansas City, Mo., on May 16.

"Nationally prominent people in the oil industry are being contacted to lecture at the symposium," Marlin M. Volz, dean of the School of Law, said.

Among the subjects to be discussed will be: unitization, leasing of the public domain, percentage depletion tax problems, and oil and gas royalties.

The symposium will be open to the general public.

Wisconsin Oil-Heat Group honors past Presidents

WISCONSIN OIL - HEAT ASSOCIATION, Milwaukee 2, Wis., held a special "Past Presidents' Night" at its regular meeting, February 28, at the Wisconsin Hotel in Milwaukee.

Past presidents who have served the Association during its 30 years of existence were on hand to participate in the ceremony which was arranged in their honor.

Heating Wholesalers plan first national Convention

THE FIRST NATIONAL CONVENTION of the American Institute of Wholesale Plumbing and Heating Supply Associations, Inc., Washington, D. C., has been set for October 19 through 22 at the Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.

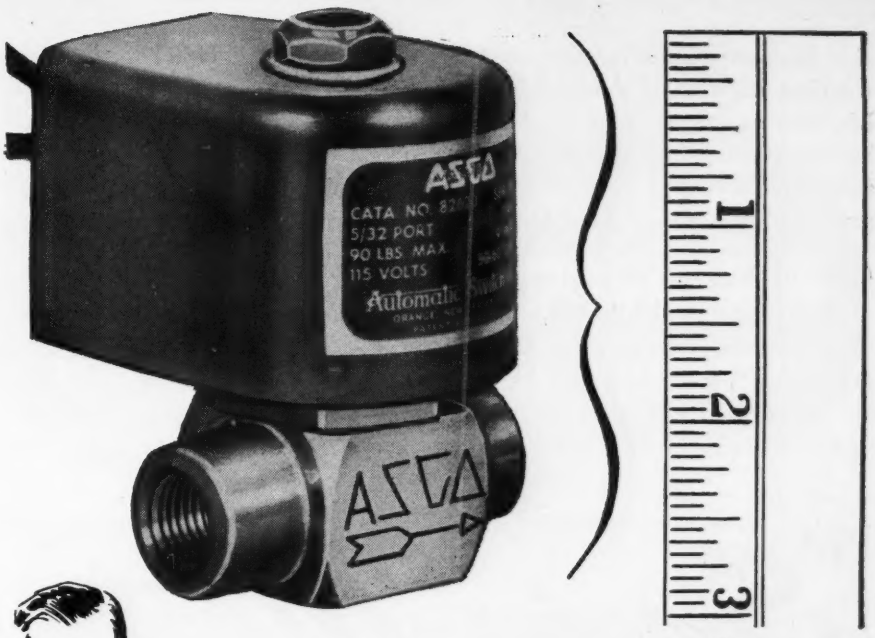
A speaker of national prominence is now being lined up for the principal address and presidents of some of the leading manufacturers in the industry have already accepted invitations to address the group.

Plans are still in an early stage of formation.

OHA of Maryland hears New York Chairman of OIIC

OIL HEAT ASSOCIATION OF MARYLAND, Baltimore 1, Md., at its regular monthly meeting, March 18, heard as its featured guest speaker, W. Chalmers Burns, president, Hartol Petroleum Corp. and chairman of the New York-New Jersey District Oil Industry Information Committee, American Petroleum Institute, New York 20, N. Y.

The OHA of Maryland, Distribu-



Announcing

ASCO MIDGET SIZE
2-WAY SOLENOID VALVE
WITH
Time Delay Feature

This new ASCO 2-Way Solenoid Valve is only 2-13/16 inches from top to bottom.

It is the standard Bulletin 8262 valve with special Time Delay Feature which allows time to purge the fire box, thus eliminating lazy smoky starts. The action delays the flow of oil from approximately 3½ to 4½ seconds after the solenoid has been re-energized. Thus, by helping to provide instant combustion, this sturdy dependable valve meets one of the most exacting requirements of oil burner service. The same feature is useful for machine duty or instrument air application, where it is desired to delay the valve opening after it is energized.

Now available from stock, this ASCO 2-Way Solenoid Valve has ⅛ inch pipe connection and 1/16 inch port. Permissible pressures up to 125 pounds. Equipped with continuous duty coil for 115 Volts, 50-60 cycles. Brass or stainless steel body; stainless steel operating parts. Soft composition disc to provide tight shut-off. Valve can be mounted in any position without affecting time delay.

• • •

We also have available the "midget" 3-Way Valve (Bulletin 8314) with a similar time delay feature for unloading service in compressors, for example, where it is desired to keep the compressor unloaded until it reaches full-running speed. These valves also are available from stock.

• • •

These two special Time Delay Valves are indicative of the design and manufacturing service available to industry through our engineering department. We shall be glad to help you in your problem.

ASCO Solenoid VALVES

Automatic Switch Co.
385-F Lakeside Avenue • Orange, New Jersey
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tion Division chapter member of the Oil-Heat Institute of America heard Mr. Burns speak on the operations of his committee whose purpose is to inform the American people on the true story regarding the oil industry.

OHI of Greater Washington seeks stricter building Codes

BELIEVING THAT THE QUALITY of heating installations in new homes has fallen below the minimum standards which the home buyer has a right to expect, the Oil-Heat Institute of Greater Washington, Washington 1, D. C., is working to set up a meeting of interested persons to discuss the possibility of recommending changes in existing codes.

One meeting already has been held and the Oil-Heat group is trying to interest the Home Builders Association to join with them on a committee to recommend changes or amendments to the building codes in the greater Washington area which would set up minimum requirements for the installation of heating in new homes.

In a letter to J. W. Pearson, executive director, Home Builders Association, Washington, D. C., A. Graham Shields, managing director, Oil-Heat Institute of Greater Washington, said in part, "We believe this problem is now a headache to the builders, and is also of great concern to those furnishing the fuels."

The Oil-Heat group believes that there is no doubt that the architects and builders in the Washington area have been forced by competition among themselves to reduce their costs of construction to the point where installations may be below standard.

New Jersey fueloil Dealers form Group under OHI

REPRESENTATIVES of more than 50 independent dealers of Union County, New Jersey, voted formally on February 28 to organize in an industry group, under affiliation with the Distribution Division of Oil-Heat Institute of America.

In the organization meeting, officers and directors for the new association were elected and steps initiated for incorporation of the group under laws of New Jersey and for application for membership in OHI.

The name of the new group has not yet been officially designated, but the new organization represents an outgrowth of the Fuel Oil Dealers of Eastern Union County.

Robert M. Crane, Reel-Strong Coal Co., Cranford, was elected president; Phil Carter, T. R. Loizeaux Fuel, Plainfield, secretary and Edward Clements, Clements Bros., Westfield, treasurer. Hyman Isaac, attorney for the predecessor group, will continue as legal counsel for the new association.

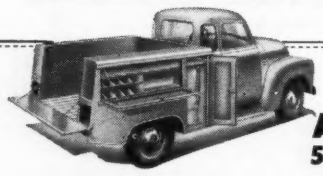
Elected directors were: Lou Finkel, Leo Kramer, Wes Lammerding, Al Rosenberg, James Wood, Harry Holland, Les Stites, Cyril Poling, George Wood, Russell Mann and George Wirth.

Fred S. Burroughs, national secretary of the Distribution Division, OHI, highlighted the relationship between local OHI chapters and National OHI operations at the meeting. He then introduced F. N. Beckwith, ex-

says **MR. FRANK COAN**
COAN BROS., NATICK, MASS.

"We like the Service-Master Body because it enables us to carry all tools and materials we'll need for a day's work. Everything stays in order, too . . . easy to inventory before we leave for the job . . . easy to find when we get there. In a year's time, Service-Master has saved us enough man-hours to literally pay for itself."

If your present truck equipment isn't adequate for your work, why not get the full story on the efficient Service-Master Body? Just clip the coupon below . . . paste it on a post card . . . and mail it. You're under no obligation, of course.



McCABE-POWERS AUTO BODY COMPANY
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Please send me literature and complete information about Service-Master

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Company _____

Address _____

City _____ Zone ____ State _____

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ecutive secretary, Oil-Heat Institute of New England, who illustrated the need for strength through unity in today's complex economy.

Nebraska Petroleum Marketers hear Talks at Spring Meeting

OTIS H. ELLIS, general counsel, National Oil Jobbers Council, Washington, D. C., was one of the main speakers at the Spring meeting of the Nebraska Petroleum Marketers held at the Yancey Hotel, Grand Island, Nebr.

Mr. Ellis reported to the Nebraska jobbers on national affairs and bills of interest to the oil industry which are now pending in Congress.

Jobbers' business records, with suggestions for improvement, were discussed by A. W. Johnson, co-owner of Nebraska-Iowa Oil Co., Blair, Nebr., and a member of the board of directors, Nebraska Petroleum Marketers.

E. H. Lohr of Columbus is president of the marketing group. Fred K. Evans of Arapahoe is first vice-president and Clayton Peterson of St. Paul is second vice-president.

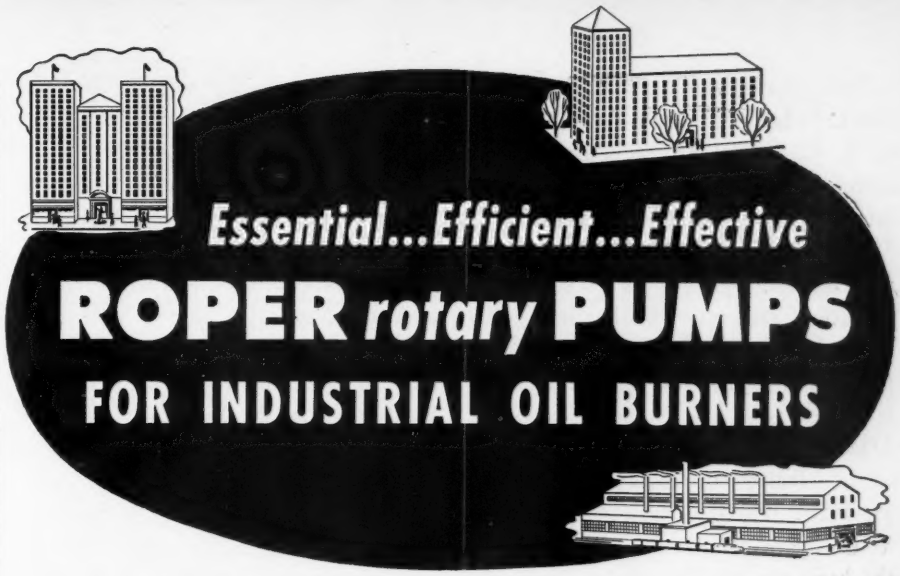
Sub-committees created at OIIC quarterly Meeting

THE OIL INDUSTRY INFORMATION COMMITTEE, American Petroleum Institute, New York, N. Y., wound up its first quarterly session of this year at San Antonio, Tex., by creating three sub-committees.

National OIIC chairman, C. Z. Hardwick, vice-president, Ohio Oil Co., Findlay, O., nominated James Boudreau, Ethyl Corp., New York, to head the new dealer sub-committee. Harry Milton, Milton Oil Co., St. Louis, Mo., was appointed chairman of a new jobber sub-committee and the new speakers' committee will be headed by Frank Martinek, Standard Oil Co. (Indiana).

Program announced for NPA Cleveland Meeting

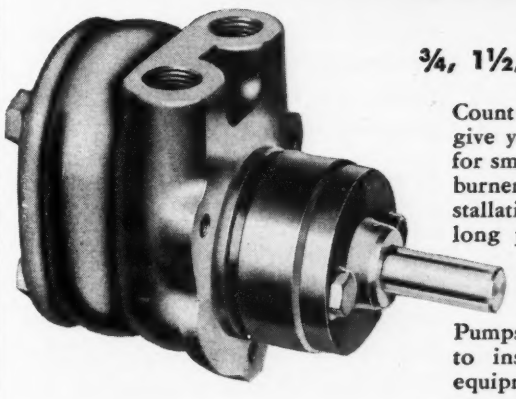
THE SPRING MEETING of the National Petroleum Association, Washington 4, D. C., to be held April 16 through 18 at the Hotel Cleveland, Cleveland, O., will feature talks on synthetic fuels, petroleum price controls and some of the broader issues facing the American people.



Essential...Efficient...Effective

ROPER rotary PUMPS

FOR INDUSTRIAL OIL BURNERS



¾, 1½, 3 and 5 G. P. M. SIZES

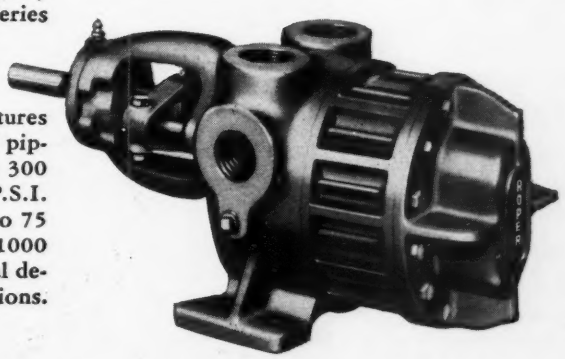
Count on Roper Series "K" Pumps to give you the features that are essential for small and medium-size industrial oil burners. Compactness and ease of installation . . . dependable operation over long periods of running time . . . fuel supply at correct pressure and viscosity are but a few advantages offered by Roper Series "K" Pumps. You owe it to those you serve to install Ropers as either original equipment or replacement.

Tested and Approved for Oil Burner Service

Roper Series "K" Rotary Pumps meet the standards set up by Underwriter's Laboratories, Inc. and then some! These reliable pumps for oil burner service are available in either packed box or mechanical seal designs — with or without relief valve. The 3/4, 1-1/2, and 3 G.P.M. sizes are flange mounted . . . 5 G.P.M. size is foot mounted.

For Heavy Duty Installations

In the larger oil burners — those burning Bunker "C" oil or heavy fuels — Roper Series "F" and Series "H" are recommended. Both are positive displacement pumps, self-lubricated by liquid pumped. Series "F" features four-port design for 8 optional piping arrangements — sizes 1 to 300 G.P.M., pressures to 300 P.S.I. Series "H" Pumps come in 5 to 75 G.P.M. sizes — pressures to 1000 P.S.I. Also available are special design pumps for unusual applications.



ROPER Rotary Pumps

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GEO. D. ROPER CORPORATION
764 Blackhawk Park Avenue, Rockford, Illinois
Please send catalog with complete details.

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Address.....

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Feaured speakers at the general session to be held Thursday, April 17 will be L. C. Kemp, Jr., director of research, Texas Co.; Arthur S. Phelps, attorney, OPS Petroleum Section and Dean Clarence Manion of Notre Dame Law School.

Group sessions will be held on Thursday and Friday mornings with the program yet to be announced.

OHI of Greater Washington hears newspaper Editor

FRANK C. WALDROP, executive editor, Washington *Times-Herald*, spoke at the luncheon-meeting of the Oil-Heat Institute of Greater Washington, Washington, D. C., held at the Du-Pont Plaza Hotel, March 18.

Plumbing & Heating Show set for Atlantic City

THE NATIONAL PLUMBING AND HEATING EXPOSITION AND CONVENTION, sponsored by the National Association of Master Plumbers, Washington 6, D. C., will be held in Convention Hall, Atlantic City, N. J., June 2 through 5. 160 exhibitors have scheduled booths to make this the biggest Plumbing and Heating Exposition ever held.

The NAMP convention sessions will begin at 1:00 p.m. in the ballroom of Convention Hall, on Monday, June 2. The Exposition will open at 9:00 a.m. on Monday, June 2 and will close at 5:30 p.m. through Wednesday, June 4, with the closing time at 2:00 p.m. on the last day.

Final arrangements for the program have not as yet been completed. It is expected, however, that U. S. Senator John J. Sparkman, Dem., Ala., will be one of the guest speakers. It is also planned to have a panel of five home equipment editors discuss the housewife's viewpoint and opinions of the plumbing and heating contractors.

Combating Gas by "Mr. Therm" is Topic at MOHA Meeting

FRANK LARKIN, president, Retail Fuel Institute and Jerry Holbrook, New England representative of Anthracite Institute, were the principal speakers at the monthly dinner meeting of the Massachusetts Oil Heating Association, Inc., Boston 15, Mass., held March 18 at the Hampton Court Hotel, Brookline, Mass.

The speakers discussed combating gas through "Mr. Therm," a cartoon character which represents 100,000 heat units. It is featured in pamphlets prepared by Consumer Fuel Institute, Boston, Mass., and explains in non-technical language the importance of therms in figuring heating costs.

Wisconsin Dealers plan oil heat Campaign for 1952

"OIL HEAT'S COMPETITORS in Wisconsin in 1951 made over 22,000 installations in one year while we made only 8,000." This statement was made by Carter Wells, past president, Wisconsin Oil-Heat Association, Milwaukee 2, Wis., in an annual report to the membership.

Wells reported that in 1950 there were 12,192 gas installations in Wisconsin. Today there are 51,418. In 1950 there were 64,010 oil heat installations. Today there are 76,719.

"Our competition has made strong inroads into the market that is rightly

MANVILLE

Compact . . . Tubeless
Non-Pulsating
•
5 Year Factory
Certified Guarantee
against leaks
•
Specially Designed
for Oil Firing
Easily adapted to
Gas Firing
(Convertible to Coal
in Emergency)
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JOBBER
INQUIRY
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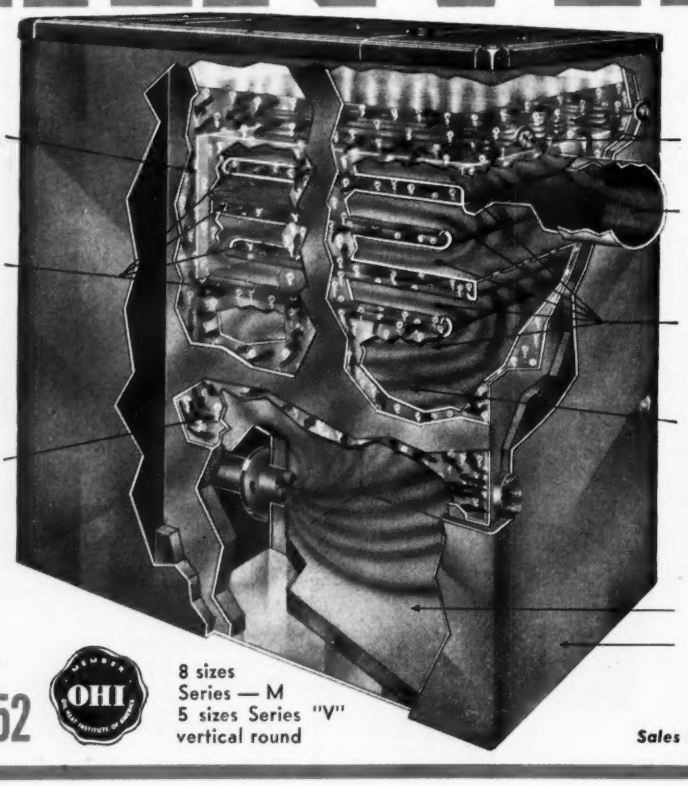
Visit our Booth at the Show No. 952



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Series — M
5 sizes Series "V"
vertical round

TUBELESS STEEL BOILERS
WITH THERMO-FLO PRINCIPLE
Greatest Improvement in
Boiler Design in 50 years

Developed through many years of experience in pioneering Tubeless Steel Boilers.
THERMO-FLO System of Induced Water Circulation within the Boiler assures Highest Performance, Quick Recovery and heats 3 times faster than similar designs that are now as obsolete as the old Model "T" Ford.

Patent No. 2575723
Issued Nov. 20, 1951
Other Patents Pending

DEALERS:—Write for full information

MANVILLE BOILER CO., INC.
Factory:—Hackettstown, New Jersey
Sales Offices:—415 Lexington Ave., New York 17, N. Y.

yours," Wells told the group. He stated that nothing compares with oil heat and if the organization would promote its dealer program right now, we will continue to maintain our position that "oil heat is the number one choice of those who prefer automatic heat."

The board of directors at its February 19 meeting approved unanimously a recommendation that an advertising fund be raised, on a voluntary basis, equal to each members 1952 dues, and that this sum be used exclusively for promotional and advertising purposes. Non-member firms would also be asked to contribute.

Kansas City oil Men Elect; celebrate St. Patrick's Day

JAY W. WILSON, retired division manager for Standard Oil Co. (Indiana), has been re-elected chairman of the Oil Men's Club of Kansas City, Kansas City 2, Mo.

Carl E. Bolte, Battenfeld Grease & Oil Co., was re-elected vice-chairman; Greg Burns, Butler Mfg. Co., was chosen a new vice-chairman and Jerome O. Hendrickson, Oil Industry Information Committée, API, was re-elected secretary-treasurer. Mrs. Hazel Waldron was re-appointed assistant secretary-treasurer.

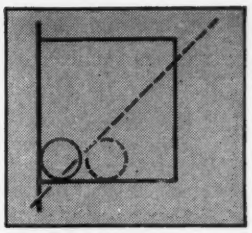
New members of the board of governors are: W. M. Gadberry, Columbian Steel Tank Co.; J. N. Koontz, Sinclair Refining Co.; Clark Lillis, Southern Oil Co.; Jerome O. Hendrickson and Greg Burns.

Daniel C. McCarthy, assistant manager of public relations, Socony-Vacuum Oil Co., New York, N. Y., spoke at the annual St. Patrick's Day celebration held at the Hotel President, March 17.

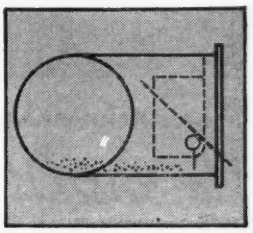
Hold 4-day warm air short Course at Purdue

THE THIRD ANNUAL PURDUE Warm Air Heating Short Course sponsored by Indiana Sheet Metal & Warm Air Heating Contractors was held April 9 through 12 at the School of Mechanical Engineering, Purdue University, West Lafayette, Ind.

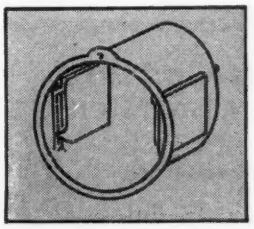
Morning, afternoon and evening sessions were conducted by a staff of 28 university instructors and experts from manufacturers.



ROLLING TYPE HINGE PIN means no friction, no binding, no need for oiling, no fear of corrosion. Off-Center Gate Mounting lets draft operate on a greater effective area.



EXTENDED HOUSING places gate well outside the flow of fouling soot and gases. Warping or binding of gate are eliminated assuring full sensitivity.



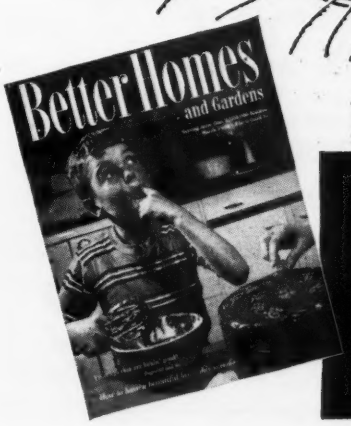
SIDE WINGS mean greater accuracy as they allow the area of the opening through the control to increase uniformly. Gate is shaped to fit closely to wings.

don't send a boy on a man's errand

See our Display Booth 152, Oil Heat Institute Convention, Philadelphia.

field

The Draft Control that's nationally advertised in BETTER HOMES & GARDENS



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AFFILIATES:

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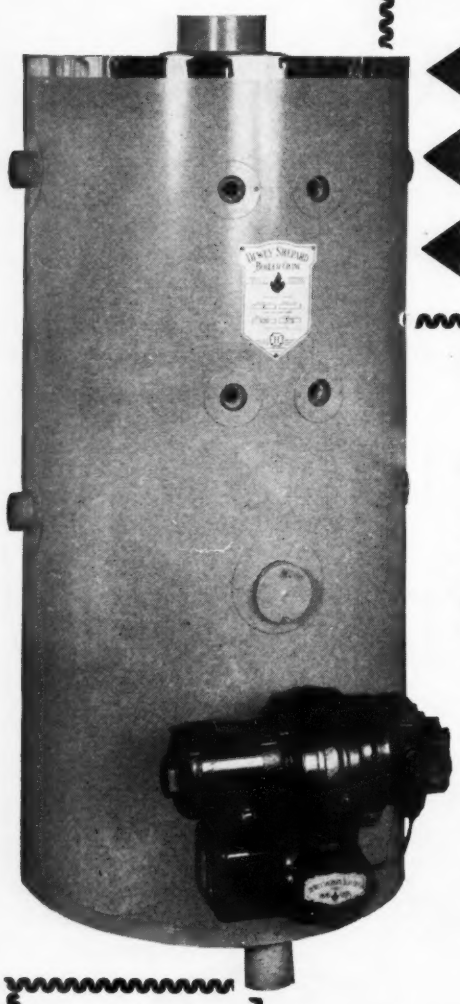
Manufacturers' Activities

Sid Harvey added to OHI Speakers' bureau Roster

SID HARVEY, INC., Valley Stream, N. Y., has joined a group of manufacturers who are cooperating with the Oil-Heat Institute of America in supplying qualified speakers for a Speakers' Bureau Service which is being undertaken by the OHI to arrange for lecturers at Distribution Division chapter meetings.

Sid Harvey, Inc. has offered to conduct meetings on three subjects: trouble shooting—fuel units; trouble shooting—stack relays and trouble shooting—G.E. equipment.

The OHI speakers' bureau plans to book dates for speakers from all participating companies who join in the program, check engagements and act as a clearing house for the program between the Distribution Division chapters, and Manufacturer and Accessory Division members.



Ready to Install

DEWEY-SHEPARD

OIL OR GAS

BOILERS

YOU GET 80% OR MORE HEAT ABSORPTION WITH

the Tube within a Tube

This "Tube within a Tube" action results in pre-heating the incoming cold water before it comes in contact with the metal surfaces to which radiant heat is being applied. By this application you offer your customers many advantages such as:

- LESS FUEL USED
- LOWER INSTALLATION COST
- NO LIME—NO SCALE
- 20% LESS HEAT LOSS THROUGH THE STACK
- NO EXPANSION, CONTRACTION OR CONDENSATION
- CLEANEST HEAT POSSIBLE
- SUFFICIENT HOT WATER AT ALL TIMES
- CAPACITY 95,000 TO 1,000,000 BTU

Easy application to all hot water systems.

- TWO PIPE
- ONE PIPE
- CONVECTOR
- PANEL & RADIANT
- SUMMER-WINTER HOOK-UP

In the "Tube within a Tube" boiler there is one square foot of heating surface for every gallon of water. This method transfers every possible unit of heat to the water and results in EFFICIENT AND ECONOMICAL OPERATION.

Write Today — ***Get descriptive literature, prices and other information.***

DEWEY-SHEPARD

BOILER COMPANY, INC.

1311 NO. CAPITOL AVENUE • INDIANAPOLIS 4, INDIANA

Hall-Neal Furnace holds two-day sales Conference

HALL-NEAL FURNACE CO., Indianapolis, Ind., held its annual Dealers' Sales Conference at the Marott Hotel, Indianapolis, February 27 and 28.

Fred S. Boone, president of Hall-Neal opened the meeting greeting the 215 dealers and their families who attended.

Featured speakers were Professor S. Konzo who gave an address entitled, "A Report on Warm Air Heating," and E. R. Brandes, president of Brandes Co., who spoke on "Wall Base Heating."

A dealers' sales promotion contest for March, April and May was outlined the second day. Fred Gombert, sales manager, closed the conference with a talk on "Follow Through in '52."

Thatcher Furnace adds new Warehouse

THATCHER FURNACE CO., Garwood, N. J., has established warehouse facilities for its furnaces and winter air conditioners at Fayetteville, O. to improve service and deliveries for its customers in Ohio and Kentucky. Harold C. Sparks of Fayetteville has been placed in charge.

Tuthill offers Guide to pump Applications

TUTHILL PUMP CO., Chicago 19, Ill., is offering a new type reference chart on small pump applications which it has developed.

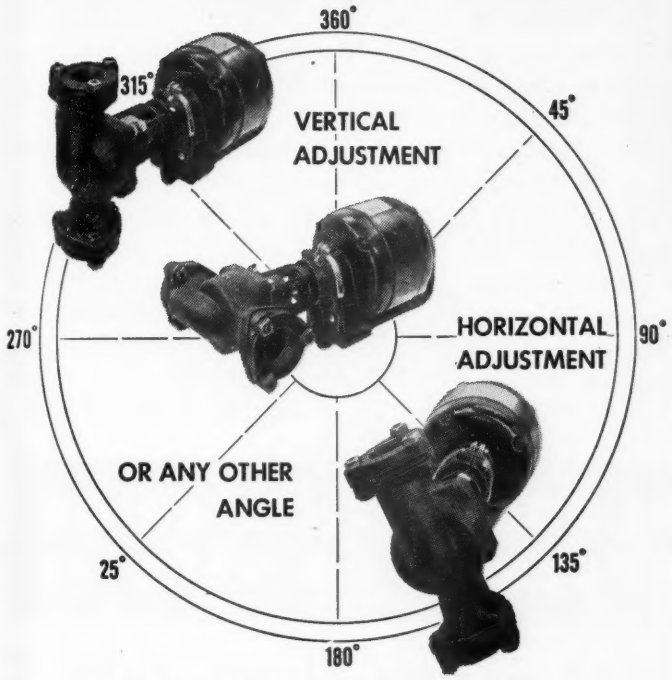
This guide lists the various types of Tuthill pumps, the services for which each is built, the performance characteristics, types of packing, styles of mounting and features which distinguish each model.

Manville starts Production on tubeless steel Boiler

MANVILLE BOILER CO., INC., New York, N. Y., has begun production on a small vertical tubeless steel boiler for the low cost housing market.

The Manville boiler unit is compact, built for close quarters and has high

LOOK to... Econo for MORE



"Instantly" ADJUSTABLE TO EVERY ANGLE

Econo Circulators are instantly adjustable . . . by loosening one clamp entire pump assembly may be set for any direction of flow . . . any point on a 360° adjustment. Nothing to take apart, no bolts to remove, no gaskets to replace, no leakage.

Open fin impeller design • Will not overheat • Provides sustained head pressure • Exclusive Neoprene vibration dampers reduce noise transmission.

See us at the Show—Booth 871

MFGS. of CIRCULATING PUMPS, LOW WATER CUTOFFS
FLOW VALVES HEATING SPECIALTIES

ECONO PRODUCTS COMPANY
17 State Street New York, N. Y.
FACTORY: EAST HADDAM, CONN.

Keep Your Service Crew *Busy the Year Round*

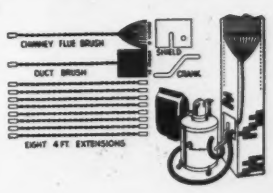
Most fuel companies and heating equipment people recognize the importance of Furnace Cleaning as a profitable business. Many service companies occupied almost entirely in the servicing and repair of heating plants find a field of greater profit in adding furnace cleaning to their services.

In summer, the normal off-season period, furnace cleaning keeps your service crews profitably busy.

General Electric Furnace Cleaners are compact, easy-to-handle and built for extra-heavy duty. They convert quickly to powerful blower action for loosening soot and grime in stubborn corners. Easy mobility makes a hit with cleaning crews. You get more work jobs and can keep busy the year round.

G-E Chimney Cleaning and Air Duct Equipment

Makes job go faster. Prevents soot from escaping into cellars. Revolving handle and vacuum hose fit through special shield that scoops up falling soot. Set includes Shield, Crank, Chimney Flue Brush, Duct Brush and 32 feet of extensions.



Mail coupon for details.

Furnace and Boiler Cleaners

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-1639
1285 Boston Ave., Bridgeport 2, Conn.
Without obligation, please send complete details on heavy-duty cleaning equipment.

NAME.....

FIRM.....

ADDRESS.....

CITY..... STATE.....

quality performance with long life. The boilers are available in five sizes, two for steam heating systems and three for hot water heating. Hot water radiation ranges from 440 to 640 sq. ft.

Williams sales Drive exceeds Expectations

AN OFF-SEASON SALES DRIVE by Eureka Williams Corp., Bloomington, Ill., to stimulate sales by Williams Oil-O-Matic dealers during a non-peak selling period broke all sales records and greatly exceeded the company's expectations according to E. H. Davison, general sales manager of the Williams Division.

The campaign, which ran from October 22 through December 8, awarded U. S. Defense bond bonuses to Oil-O-Matic dealers and their salesmen over and above their regular sales commissions. Bonds were awarded on a point system determined by the total number of heating units sold by a salesman. One $25 bond was given for every 1,875 points.

The six high point scorers were:

W. L. Burt, Red Feather Oil Co., Salt Lake City, Utah, 31,500 points.

M. E. Filipetti, Bristol Oil Heating Co., Bristol, Conn., 15,575 points.

A. E. Hulet, Midwest Engineering Co., St. Paul, Minn., 13,675 points.

M. E. Small, Hauck Engineering Co., Barrington, N. J., 13,150 points.

H. E. Schreiner, Stoll Oil Refining Co., Louisville, Ky., 12,025 points.

E. H. Howell, Maryville, Wash., 12,000 points.

M-H Booklet lists Tips for saving Fuel in housing Units

NINE WAYS TO REDUCE HEAT WASTE and achieve up to 25 per cent savings in fuel costs in public housing projects are graphically described in a booklet entitled, "Save Fuel, Save Dollars," published by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

The fuel conservation tips cover a variety of methods, ranging from proper combustion to zoning for wind and sun and thermostatic control in each apartment. The illustrated booklet summarizes a presentation the company made before the Technical and Maintenance Section, National Association of Housing Officials at a recent exposition.

Oil Equipment Center plans Meeting for Connecticut Group

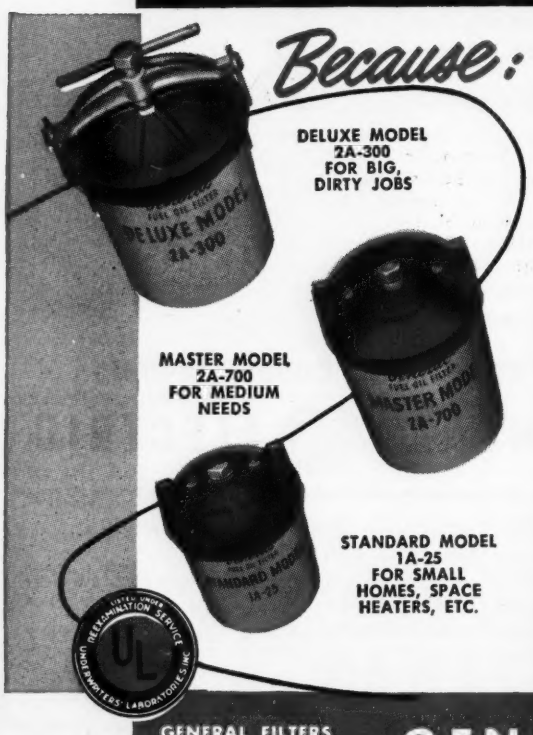
E. B. GLENDENNING, inventor of the Shell Combustion Head, and John Carlberg, Carlin Co., Wethersfield, Conn., manufacturers of U. S. oilburners, will speak at a dinner-meeting sponsored by Oil Equipment Center, New Haven, Conn. at the Seven Gables Town House in New Haven, May 14.

All industry people in Connecticut are invited to attend the dinner which will feature Arnold Michelson, vice-president, Minneapolis-Honeywell, as toastmaster.

Four mailings, as part of a promotional campaign for U. S. oilburners, are announcing the dinner-meeting. The first three mailings describe features of the equipment and the fourth mailing will announce the program of the meeting with a formal invitation enclosed.

The educational portion of the meet-

INSTALL A GENERAL FUEL OIL FILTER ON EVERY HEATING SYSTEM YOU SERVICE

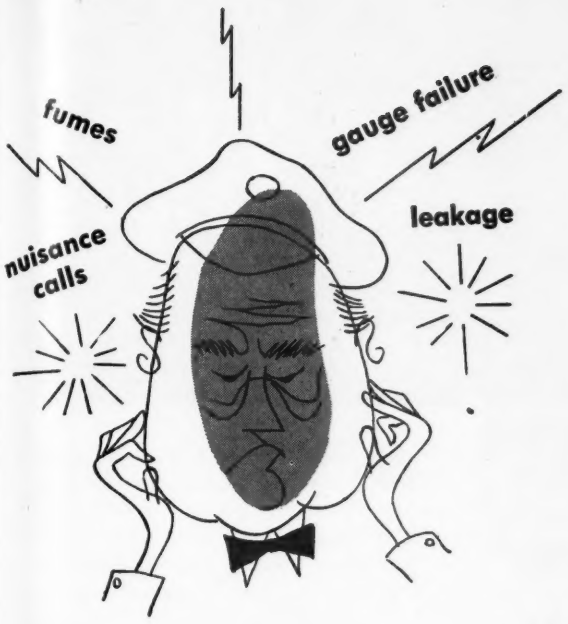


Because: GENERALS assure clean, safe fuel oils for your customers—stop costly "call-backs" for you

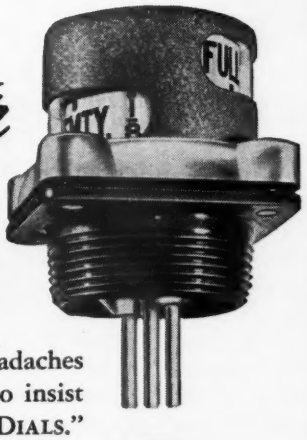
- Positive absorption with GF's double filter element. Finest felt cartridge removes the finest dirt particles. Inner wire mesh strainer prevents collapse, backs up cartridge.
- Two-minute felt cartridge replacements mean easy service revenue for you for years to come.
- Your customers will WANT GENERAL FILTERS and the clog-free protection they offer the year 'round by trapping impurities before they reach burner nozzles.
- There's a GENERAL FILTER model to fit every need . . . small or large . . . home, business, trailer, etc. All that's needed is a wrench and a few minutes' work.

Remember: . . . a ⅛ inch layer of soot raises heating costs up to 25%! CLEAN RIGHT SOOT REMOVER cleans any system quickly, safely — leaves no residue.

GENERAL FILTERS INCORPORATED
GENERAL FUEL OIL FILTERS
12890 Westwood Ave. Detroit 23, Michigan
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO 13, ONTARIO



Cure these headaches with Rochester "dual-dial" GAUGES!



One sure way to avoid the headaches caused by faulty gauges is to insist on rugged Rochester "DUAL-DIALS." Their solid, leakproof construction eliminates unnecessary service calls, gives long-life dependability and assures complete customer satisfaction.

MEMBER OHI

Why not profit by these outstanding "Dual-Dial" features

- Solid head
- Pressure tight
- Easy to install
- Easy to read
- Permanent magnetic indication
- Underwriters' listed

Over 2½ million "Dual-Dials" have already proved their dependability in service. Stocked by leading wholesalers for all standard basement oil burner storage tanks with 1½" and 2" flanges. *ORDER TODAY!* Rochester Manufacturing Company, Inc., 8 Rockwood Street, Rochester, N. Y.

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

ROCHESTER DEPENDABLE ACCURACY GAUGES

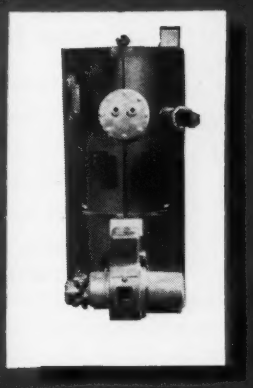
Norse

T.M. PENDING
U. S. PAT. OFF.

BOILERS DESIGNED for

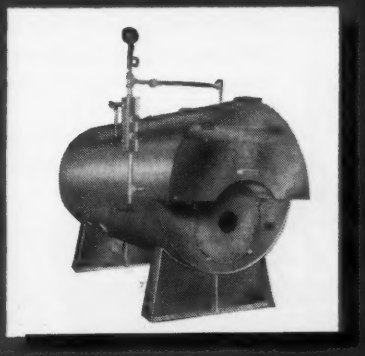
EFFICIENCY
DEPENDABILITY
ACCESSIBILITY
ECONOMICAL INSTALLATION

Oil or Gas



Economical High-Efficiency Vertical Tube Boilers

NORSE Horizontal Tubular Boilers with CIRCUMBUSTION Firing Chamber.



NORSE Commercial Series—Scotch Marine Boilers.

SEE YOUR Jobber or Write for Illustrated Data.

ASME H STAMP

Norse BOILER CO., INC.
STELTON ROAD.
NEW MARKET, N.J.

ing is designed for Connecticut dealers interested in learning how to provide consumer satisfaction.

Timken inaugurates Drive to augment sales Force

A FULL-SCALE DRIVE to augment dealers' sales forces has been launched by Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich., in face of uncertain business conditions which might affect sales during 1952.

The recruiting campaign, keynoted by the slogan "More Manpower Means More Salespower" was inaugurated at a recent series of Business Management Forums held at the Edgewater Beach Hotel, Chicago, Ill., and Park Sheraton Hotel, New York, N. Y.

Nearly 200 *Timken Silent Automatic dealers, regional managers and district sales managers gather at the Park Sheraton Hotel in New York for the Company's Eastern Business Management Forum. Merchandising manager R. M. Marberry is shown at the speaker's dais with a panel of Timken Silent Automatic dealers. The Midwestern Forum was held in Chicago.*

Basic tool in the campaign to recruit topnotch retail salesmen is an illustrated, four-section manpower manual, presented to every Timken Silent Automatic Dealer. "This manual gives dealers tested, step-by-step procedures for obtaining and utilizing better salesmen," R. M. Marberry, Timken Silent Automatic Merchandising Manager said. "If followed, the suggestions given here can't help boosting sales."

Section One of the manual offers proved ways to find good men and tells how to compensate them when they have been found. Section Two is devoted to scientific salesman selection, Section Three to training salesmen and Section Four to supervising salesmen.

Other tools of the Timken Silent Automatic drive are wall posters and gummed letterhead stickers featuring the campaign slogan.

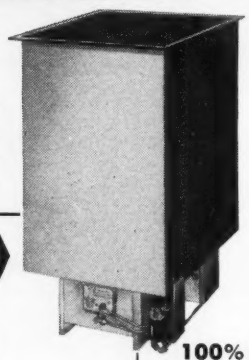
Perfection holds District sales Meetings

APPLIANCE SALES DIV., Perfection Stove Co., Cleveland 4, O., has been conducting two-day sales meetings in each of the company's national sales district

no duct installation

and automatic self-lighting operation make

H.C. Little oil floor furnaces

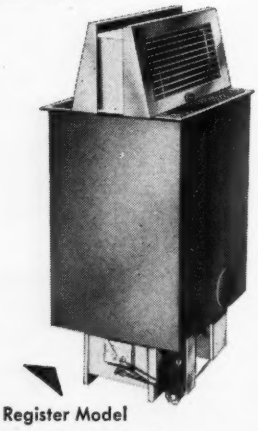


the really profitable units for you to handle!

Home owners appreciate the economical no duct installation and the H. C. Little advantages that provide uniform, whole-house heat!

QUICKLY, EASILY INSTALLED—EVEN IN HOMES WITHOUT BASEMENTS

Standard Register Model
Two Sizes: 50,000 and 75,000 BTU heat output.
Special Shallow Floor Furnace with Standard Register available that is only 34" deep: 50,000 BTU heat output.



Dual Register Model
Two Sizes: 55,000 and 80,000 BTU heat output.

100% AUTOMATIC OPERATION—Patented vaporizing burner lights itself electrically, regulates itself—is thermostatically controlled—yet has no moving parts of any kind to wear or make noise!

PATENTED LOW-VOLTAGE IGNITION—takes the bother out of home heating—has no pilot light to waste fuel or make soot—no high voltage spark to cause radio or television interference.

PROGRESSIVE LOW-TEMPERATURE CARBURETION—produces high heat output without fuel "cracking"—leaves no soot or hard carbon deposits!

SPECIAL OIL HEAT CONTROL—permits burning lowest cost furnace oils, *including catalytic oil!*

TESTED AND LISTED BY UNDERWRITERS' LABORATORIES AND C.S. 113...PLUS MANY MORE SALES PRODUCING FEATURES

WRITE TODAY FOR COMPLETE SPECIFICATIONS AND SALES PLAN

H.C. Little Burner Company, Inc.
Head Office: San Rafael, Calif.

Factory Representatives in 16 Principal Cities

BASIC TEST TOOLS

FOR PROFITABLE SALES AND SERVICE

Combustion testing will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown above contains precision-made, quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, adjusting any make and type of oil burner for clean, trouble-free and economical operation, or running an efficiency test which will convince even the most skeptical customer on the need for replacement or modernization.

The FYRITE Utility Kit contains instruments for measuring not only CO_2, stack temperature and draft, but smoke in the flue as well. The inclusion of the smoke-measuring instrument is a forward step of significant importance to alert heating dealers and service men. Checking the flue gas for both CO_2 and smoke makes possible to adjust the burner with speed and ease for highest possible combustion efficiency, as well as for clean burning of the fuel resulting in heating plant performance that satisfies customers and safeguards against costly service requirements.

•

The FYRITE Utility Kit shown above is part of the complete line of Bacharach Service Instruments for the Heating Trade which, in addition to Combustion Testing Kits, includes Temperature Recorders, Grille Velocity Indicators, Pyschrometers, and specialized oil-burner servicing equipment. Your wholesaler will gladly supply any of these instruments.

BACHARACH Industrial Instrument Company
7000 Bennett Street • • Pittsburgh 8, Pa.

S *stands for* SERVICE

...and for SATISFACTION

Yes, "S" stands for both Service and Satisfaction, and the "S" in this case represents *Utica* Heating systems. Utica boilers and radiators are easily installed, give real heating comfort, and bring satisfied customers.

UTICA RADIATOR CORPORATION

UTICA 2, NEW YORK

offices.

Meetings have been scheduled for Atlanta, Ga., the West Coast branch offices in Oakland, Calif., and for Perfection's distributors, Industries Sales Corp., New Orleans, La.

L. Bushfield, general sales manager, J. H. Rasmussen, vice-president and director of appliance sales and W. F. Leuszler, assistant to the sales manager already have completed sales meetings at Jersey City, N. J., Chicago, Ill., St. Paul, Minn., Kansas City, Mo., and Cleveland, O.

Engineering Society honors Bell & Gossett Executives

MEMBERSHIPS in Pi Theta chapter of Pi Tau Sigma, honorary mechanical engineering fraternity at Northwestern Technological Institute, have been conferred upon R. E. Moore, vice-president and secretary, and Harold A. Lockhart, chief engineer, both of Bell & Gossett Co., Morton Grove, Ill.

Moore, who was guest speaker at the ceremony, received a special citation which read: "One who through outstanding leadership has brought Bell & Gossett to a top position in its field."

Professor Burgess Jennings, past national president of the society, also addressed the meeting.

George Lecoq, *(left), first European to graduate from the Coleman Co., Wichita, Kans., dealer training school and William R. Hattan, Coleman sales representative, examine a Blend-Air furnace equipped with a new Coleman gun burner. Lecoq, one of the principals of Paul et Georges Lecoq et Cie, newly created Coleman distributor of heating equipment in Stavelot, Belgium, went through the school with two different classes of American dealers checking on service and installation procedures and learning new merchandising methods. Lecoq reported that Belgian householders since the war were swinging over to oilburning heating equipment because of its cheapness to operate and convenience over coal-burning stoves.*

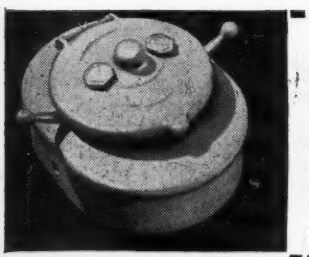
Argus Sales Co. represents Acme line in New York

ARGUS SALES CO., 380 Second Ave., New York, N. Y., were appointed by Acme Heating Div., United Tool & Die Co., West Hartford, Conn., as sales representative for its complete heating line in the New York area, embracing New York city proper, Long Island, New Jersey and eastern Pennsylvania. Included in the Acme line are the Acme Dual 8 and Dual 6 boiler-burner units and the new Acme Dual-Aire warm air conditioner.

FOR QUICK-OPENING, TIGHT-CLOSING, POSITIVE-LOCKING MANHOLES

SPECIFY "Manholes by Philadelphia Valve"

no matter who builds your tank trucks

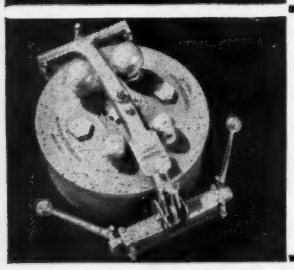


Standard Manhole

Size 12" x 16" with 6½", 8", or 10" fill opening. A slight turn of locking ring opens and closes cover.

Self-Closing Manhole

Size 12" x 16" with 10" fill opening. Self-closing, with positive locking device. Opened by raising lever on either side.



14" Diameter Self-Closing Manhole

For heavy fuel-oil tanks. Self-closing, with positive locking device. To open, lift either lock arm and raise cap.

Write the words "Manholes by Philadelphia Valve" into your order. These quick-opening manholes are absolutely tight. They surpass every fire underwriter's standard. They open and close easily and quickly. They are built to outlast the tank.

Each type of manhole is simple, strong, and foolproof. Covers are leakproof. Covers and plugs are of malleable iron or heat-treated aluminum. No cast iron is used. "5-in-1" vents automatically close if truck upsets, and will release under 6 lbs. pressure to prevent explosion in case of fire. Gaskets are easy to keep tight.

Philadelphia Valve manholes are standard with many major oil companies from coast to coast. Make them standard on *your* tank trucks, too!

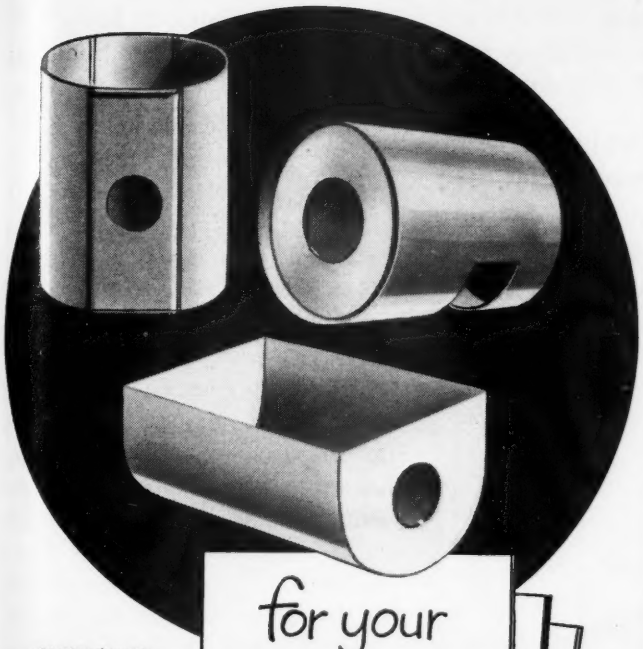
Send for catalog 170 for descriptions and engineering drawings of all Philadelphia Valve Company products.

PHILADELPHIA VALVE COMPANY

3413 Aramingo Avenue, Philadelphia 34, Pa.

Pacific Coast Distributors:

Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, California
Howard Supply Co., 5125 Santa Fe Avenue, Los Angeles 11, California



for your

COMBUSTION CHAMBERS

HEAT-RESISTING

STEEL

SHEARED TO SIZE

If you are using or contemplating the use of heat-resisting steels for combustion chambers for oil burner furnaces, we are specialists in producing these types of steels.

Whether you are a large or small user of these steels, our steel making facilities can offer exceptional service by especially shearing to your specified combustion chamber steel blanks, or multiples thereof.

1 *More quiet burner operation*
2 *Cleaner heat*
3 *Better temperature control*
4 *Considerable savings on fuel costs*

Write us for additional information

ENGINEERING B-W PRODUCTION

Ingersoll STEEL DIVISION

BORG-WARNER CORPORATION

310 South Michigan Avenue, Chicago 4, Illinois

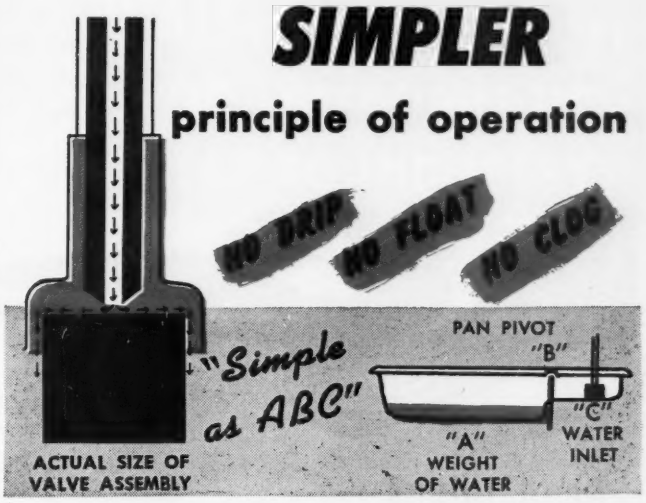
Plant: New Castle, Indiana

AUTOMATIC HUMIDIFIER

Auto-flo "100"

NEW BETTER SIMPLER

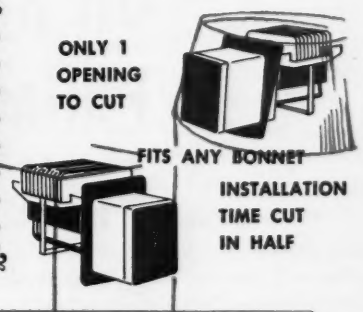
principle of operation



New AUTO-FLO "100" Principle is as "Simple as ABC": The weight of water in pan (A) counterbalances (B) the water pressure at the orifice (C) located at end of feeder pipe. As the water evaporates, it lightens pan and causes more water to flow from orifice into pan. Because this cycle operates instantaneously, a constant water level is maintained in the pan.

Years of research by Auto-Flo have finally produced an Automatic Humidifier with no moving parts to stick, adjust or wear out. The large size orifice (shown above) replaces the commonly used float valve—the part that most frequently needs repair and adjustment. No tools are required to remove pan or plates for cleaning. Each unit comes complete with evaporator plates, saddle valve, tubing and necessary fitting.

1 YEAR FACTORY GUARANTEE ON ALL PARTS



AUTO-FLO CORP.
13526 Fenkell, Detroit 27, Mich.
Please send me full information on Auto-Flo "100" Automatic Humidifier.

NAME .....

ADDRESS .....

CITY ..... **STATE** .....

AUTO-FLO CORP.

13526 Fenkell Ave. Detroit 27, Mich.

New Jersey Distributor conducts service Classes

A SERIES OF ONE NIGHT CLASSES of instruction on the service of Cleaver-Brooks, Hev-E-Oil burners were held during the week of March 3 by W. P. Gilbert Co., Irvington 11, N. J., at their show rooms.

George Halliday conducted these classes, using actual parts and burners as visual aids.

Because of the large attendance and gratifying results, meetings of a similar nature are planned to be held in centrally located points throughout the territory served by W. P. Gilbert Co.

Sid Harvey of Maryland moves to larger Quarters

SID HARVEY of Maryland, Inc., Baltimore branch of Sid Harvey, Inc., Valley Stream, N. Y., has moved to larger quarters at 1209 East 25th St.

Reese Bailey, manager of the branch, said that this move was neecssary because of increased demand for Sid Harvey repair parts.

Good things come in • • • SMALL PACKAGES

Come and see what INTERNATIONAL ECONOMY is showing at the

Oil Heat Exposition
Philadelphia
April 14-18, Booth 954

Everybody will be talking about the newest additions to the International Economy line — see them yourself at Booth 954, Commercial Museum.

You'll discover why the Economy line meets *all* of today's heating needs — why good things *for you* can come in small packages!

Over 100 Years of Heating Experience at Your Service

INTERNATIONAL HEATER COMPANY
UTICA 2, NEW YORK
WESTERN OFFICE AND WAREHOUSE - - - - 1933 WENTWORTH AVE., CHICAGO 16, ILLINOIS

Top Iron Fireman Salesmen named to honorary Societies

IRON MEN and Super Iron Men, two honorary sales societies composed of salesmen for Iron Fireman Manufacturing Co., Cleveland, O., elected 55 men to membership as recognition for outstanding sales results achieved in 1951. Thirty salesmen, for the second consecutive year, have been members of these two groups.

Six of the 15 salesmen elected to the Super Iron Men group this year were also named last year. This group includes four men, who in 1951, were named to the Iron Men society. Each of these men between January 1 and December 31, 1951, had sales in excess of $100,000 at retail installed prices.

The six who have been Super Iron Men two years in a row are:

M. J. Barrett, Iron Firemen Toronto retail branch; George C. Boyd, The Winnipeg Supply & Fuel Co., Winnipeg, Manitoba; Ralph E. Clark, Iron Fireman Sales Corp., Washington, D. C.; Frazer McKenzie, General Heating Co., Duluth, Minn. and E. T. Molloy and J. J. Zohimsky of Iron Fireman Chicago branch.

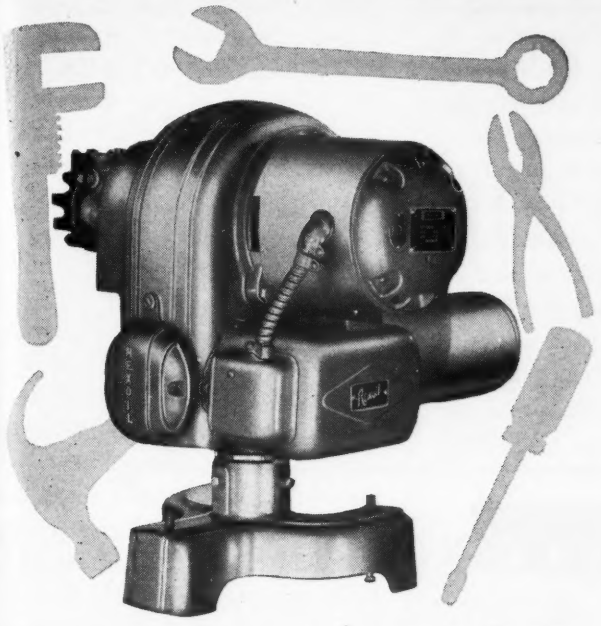
Perfection Stove elects Three to Board of Directors

PERFECTION STOVE CO., Cleveland 4, O., added three new members to its board of directors at its annual meeting, March 11, bringing to 15 the number of directors.

The new board members are: J. H. Rasmussen, vice-president and director of appliance sales; William H. Haag, vice-president in charge of manufacturing and James A. Sebold, New York investment broker with the firm of Neergaard Miller & Co.

Rasmussen joined Perfection in 1951 to head the company's cooking and heating appliance sales. Previously, he had held posts with the Crosley Corp., the Grunow Corp. and the Zenith Radio Corp. before heading his own organization of manufacturers' representatives in Chicago.

Haag has been with Perfection since 1928, serving as production engineer, production manager of the company's Platt and Ivanhoe plants and works manager of both plants. He was named vice-president manufacturing in 1951.



IT TAKES MORE THAN TOOLS TO CUT SERVICE COSTS

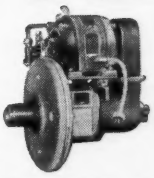
TRY THIS PLAN Install *ONE* **REXOIL**... SEE how **REXOIL'S** dependable design cuts service costs to a minimum and adds dollars to your profit column. By installing *one* **REXOIL** you'll also *see* other savings. There will be cheaper installation costs . . . greater initial profits . . . and sincere customer satisfaction. We could talk till blue in the face, — but only by observing a **REXOIL** in action can *you* see its *real* value. *So be fair to yourself* . . . install a **REXOIL** and SEE what real value **REXOIL** is!

WRITE TODAY . . . ORDER ONE REXOIL

REXOIL

Residential, Commercial and Industrial Oil Burners for #2 oil

Furnace and Boiler Units

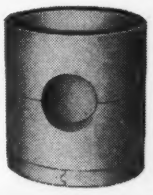


Horizontal Rotary Oil Burner for Heavy Oils

REIF-REXOIL, INC.
37 CARROLL STREET BUFFALO, N. Y.

FOLLOW THE PATHWAY TO PROFITS *with*

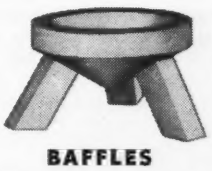
WALSH REFRACTORIES FOR THE DOMESTIC HEATING INDUSTRY



COMBUSTION CHAMBERS

Walsh-Made PeTeCo Precast Interlocking Combustion Chambers assure complete burning of oil . . . full efficiency.

Greater profits on each installation . . . bigger fuel savings for your customers . . . are the extras you get in Walsh products for the domestic heating industry. On every count... from unexcelled manufacturing facilities to long experience, careful selection of raw materials and modern production methods, Walsh-made products assure you and your customers of unvarying high quality and dependability.



BAFFLES

Tripod type precast baffles with burnt refractory legs. Saves fuel. Reduces stock temperatures.

WALSH H & B CASTABLE

Money, time and labor saving "mix-and-pour" refractory. In 50 lb. and 100 lb. moisture-proof bags.

WALSH PRODUCTS INCLUDE:

Fire Brick • Furnace Liners • Burnt Combustion Chamber Tile Plastic Furnace Lining • Castables • Airsetting Cements Asbestos Furnace Cement • Insulating Fire Brick and Cement Insulating Cement Fill

WALSH REFRACTORIES CORPORATION
101 Ferry Street • St. Louis 7, Missouri
FACTORIES: ST. LOUIS, MO. AND VANDALIA, MO.

WALSH
REFRACTORIES CORPORATION
ST. LOUIS, MISSOURI, U.S.A.
FOR OVER 50 YEARS MANUFACTURERS OF HIGH GRADE REFRACTORIES

Hot Water consumption Survey completed by Bell & Gossett

THE AMOUNT OF HOT WATER used in one year by a family of three would float a submarine chaser. The average family uses between 25,000 and 40,000 gallons of hot water a year, or from 100 to as much as 160 tons. The average adult uses about 20 gallons of hot water a day, or between 8,000 and 13,000 a year, depending on his bathing habits. The baby of the family requires three gallons every time he has a bath.

These are a few of the findings of Bell & Gossett Co., Morton Grove, Ill., manufacturers of hot water heating system equipment, who have just completed a survey on the average family's needs in order to judge accurately the proper size of the water heater.

"When a home has a water meter," R. E. Moore, vice-president, said, "it usually can be assumed that 50 per cent of the total water used may be the number of gallons to be heated. If this data is not available, Bell & Gossett uses the following figures in estimating the probable amount of hot water that will be consumed at any time: bath tub, adult, 10 gallons; baby bath, 3 gallons; regular overhead shower, 8 gallons; dishwashing, per person per meal, ½ gallon; laundry, per person, 4 gallons; miscellaneous cleaning per day, 5 gallons and personal toilet, per person per day, 2 gallons."

These figures indicate that heating domestic hot water is nearly as important as heating the house itself. Recent tests at the University of Illinois have established the economy of year around use of the boiler, when a single boiler does both jobs. Mr. Moore pointed out that using the boiler in the summer actually prolongs its life by preventing condensation and corrosion from summer dampness.

Felco OIL BURNER IGNITION TRANSFORMERS

The test of the best is performance and that's what you can depend on from *FELCO* Oil Burner Ignition Transformers. They are manufactured in accordance with standards set forth by the NEMA and approved by UL. *FELCO* Transformers are of quality design and sturdy construction guaranteed to give trouble-free performance. For top value always specify *FELCO*.

MEMO
SALES TERRITORIES STILL AVAILABLE FOR JOBBERS
WRITE TODAY

Write Today... send for descriptive and technical information and prices on *FELCO* Transformers.

THE FOREST ELECTRIC COMPANY — F E FELCO C O

Forest Electric Company
7216 Circle Drive • Forest Park, Illinois

Study of Effects of Heating in Classroom launched by M-H

AN EXTENSIVE RESEARCH PROGRAM into schoolroom heating conditions is being underwritten by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., under the direction of Dr. Darell Boyd Harman, former director of school health service, Texas State Dept. of Health.

Initial studies by Dr. Harmon point the way toward changes in the theories of what constitute proper classroom heating. The premise of his work is that the classroom should provide an environment in which the heat produced by a youngster's body will be absorbed at the proper rate to keep the body at its normal temperature.

The current research being directed by Dr. Harmon for Honeywell is a continuation of extensive studies he has already made into other phases of classroom environment.

Five state dealer Show staged by H. C. Little

HEATING MEN from Michigan, Wisconsin, Indiana, Illinois and Iowa attended a showing by H. C. Little Burner Co., San Rafael, Calif., of its recent developments and models in the oil line, held in Aurora, Ill., April 1 through 4.

Ken Swift, district factory distributor of H. C. Little Burner Co., said that this was the first of what is to

If you're gunning for Oil-Burner Sales . . . gun with the

HERCO

RESIDENTIAL

the oil-burner that's best by fire test!

Yes, it's factually TRUE

. . . that the HERCO RESIDENTIAL (and every other Herco burner) is given our "A to Z" *factory fire test* before pronounced fit to fill your order.

. . . that every piece of metal that goes into the assembly of a HERCO RESIDENTIAL is a grey or malleable iron casting.

. . . that every Herco oil burner is *precision-machined* for best performance.

. . . that there is interchangeability of parts among all models in the complete HERCO line.

. . . that every HERCO oil burner will give years of trouble-free service. (We can back this statement with many actual case histories.)

THE "DEPENDABLE" HERCO LINE IS WORTH INVESTIGATING FURTHER!

Write today! Send for our three folders, describing in detail the Herco family of fine oil burners. If you are interested in selling dependable burners with a profit you can pocket for keeps (without costly returns), then write today.

HERCO
The Oil-Thrifty
OIL BURNER

HERCO OIL BURNER CORPORATION
LANCASTER, PA.
See the Herco Oil Burner Exhibit, Booth 521, Annual Oil Heat Exposition and Convention.

NOW! SAVE UP TO 25%

on . . .

COAL . . . OIL . . . *and* OTHER TYPES *of* FUEL *with Improved, New*

WALKER

FUEL-SAVER DRAFT REGULATORS

Over 7 Million Now in Use!

Why not help *your* customers save as much as one-fourth on fuel costs . . . yet enjoy *more* efficient heating performance! Doesn't matter what they burn, either. New, improved Walker Fuel Savers assure maximum combustion with *any* type fuel . . . under *all* stack conditions. This means *even* heating, prevents costly "up the chimney" heat loss. There's a quickly installed, easily adjusted Walker Regulator to fit every make heating unit.

Model BB

Model BB
COMMERCIAL and INDUSTRIAL

(Ball Bearing) Built to meet toughest conditions. Sizes 16-36 inches. Ideal for power plants, schools, garages, industrial plants, laundries . . . thousands in use!

WALKER FUEL SAVER
AUTOMATIC DRAFT REGULATOR

WALKER MFG. & SALES CORP.
1757 PENN ST. ST. JOSEPH, MO.

World's largest factory producing Automatic Draft Regulators exclusively . . . not competing either directly or indirectly with producers of any type heating equipment.

become an annual gathering with his dealers. About forty pieces of equipment were kept on display for several days after the close of the showing to permit inspection by the public.

Bethlehem Foundry elects Taylor President

GEORGE A. TAYLOR has been elected president, Bethlehem Foundry & Machine Co., Bethlehem, Pa., succeeding J. H. Van Sciver.

Taylor appointed Homer Cloukey as sales manager for the Oilburner Division. C. K. Dumars was made special representative of the Oilburner Division for dealer contacts. Ray Dietz is now assistant to Homer Cloukey.

Equipped service Car aids Perfection's field Engineers

TOURING FIELD ENGINEERS for Perfection Stove Co., Cleveland, O., take with them to field service clinics, furnace service schools and other places, a specially equipped service car.

The equipment this service car carries includes operating gas demonstrator 3-stage burner, Superfex hi-pressure oilburners, demonstration gas and oil furnace control panels, and Perfection's new "Regulaire" furnace blower control. A slide projector and screen also are included for service schools.

Bert Cowan operating own supply Business

BERT COWAN, formerly with Atlantic Burner Supply, has established his own business, the Best Cowan Co., located at 852 Rogers Ave., Brooklyn 26, N. Y. He is an authorized service station and distributor for Penn controls and, in addition, distributes Stop Fire extinguishers, Kirkman fuses, Permatex and Tork clocks. The firm handles at wholesale Minneapolis-Honeywell, Perfex, White Rodgers, Sampsel and Mercoid controls, General Electric, Grand Rapids and Pullman vacuum cleaners.

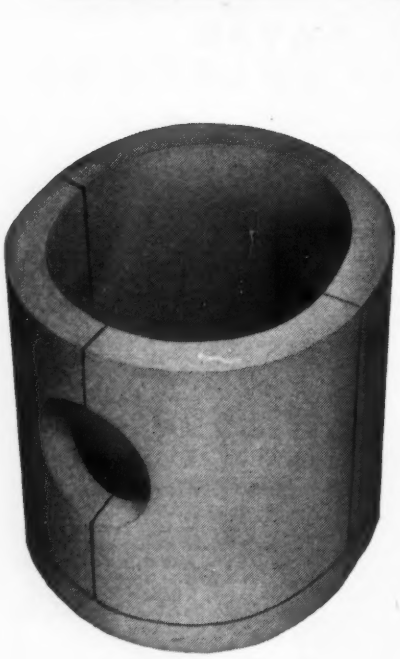
Cowan has been in the oilburner business since 1933 and several years later organized his own company to handle both burners and fueloil. In 1926 he entered the wholesale field with Atlantic Burner Supply, setting up the firm's rebuilding department.

❖

Richard W. Chadwell, 49, president and general manager, Weatherall Engineers, Inc., Providence 4, R. I., died suddenly on February 24. Funeral services were held February 27 at the T. F. Monahan & Son Funeral Home and he was buried at Swan Point Cemetery. Previous to joining Weatherall, Chadwell was associated with the Mercoid Corp. Surviving are his wife, Phyllis Chadwell; his sons, Richard and Charles; a daughter, Judith; two brothers, Paul H. and John T. and a sister, Mrs. William Haddad.

Rudolph Rehm, who operated his own business in Jamaica, N. Y., died suddenly on March 9 of a heart attack. One of the pioneers in the industry, he first organized the Sword Oil Burner Co. in New York in 1925 to handle the Sword & Kimber oilburner. Later connections included Century, Kleen-Heet, York and other burner manufacturers. Mr. Rehm was an active member of the Oil Heat Old Timers, Inc., and left his business to his son, Rudolph, Jr., who will continue it.

Do Your PRESENT PRECAST CHAMBERS Give You ALL these Advantages?



1. Low initial cost.
2. Low installation cost — only 5 pieces to assemble.
3. K-factor equal to insulating brick.
4. Excellent performance with either high or low pressure burners.
5. Scientifically packed to prevent breakage.

. . . if the answer is NO -- contact us NOW!

KOLB REFRACTORIES COMPANY
Meadow & Jackson Sts.
Philadelphia, Penna.

KolbKast Insulated Chambers

Readers' Problems

Q. After try-outs, we find that the driveway method for rejuvenating old tankless heaters (p. 90 of your August issue) certainly removes all lime in a hurry and makes the heaters seem more peppy than new even! Now in planning to so rejuvenate the tankless heater of an apartment house in a large nearby city, we are told there'll be interference with health or plumbing authorities who are concerned with putting acids into the water piping coils, whether we do this with the heater in the boiler or off the premises. Can you give us anything on this point to help us?

B. N. F., White, Plains, N. Y.

A. As what you've been told makes sense, you should consider having the lime-removing done by specialists in the particular city, whose activities in this direction have the approval of all interested city authorities. We suggest that, since you are in the metropolitan New York area, you obtain information on having the coil cleaned by the following company, which distributes parts for Fitzgibbons and Kewanee boilers: the Steel Boiler Repair & Service Co., Inc., 1137-1145 Prospect Ave., New York 59, N. Y. There's an advantage, of course, in being able to obtain a new tankless coil quickly, if the one being cleaned proves in need of replacement.

* * *

Q. Is it possible to obtain domestic hot water from an oil-fired boiler connected to a hot water heating system, without the use of a circulator and flow control valve? Why couldn't a motorized valve be installed at the usual location of the flow control valve, with the thermostat operating this valve? An Aquastat would start and stop the burner to keep the boiler at 160° at all times.

The radiators would not heat as fast as with a circulator, but the arrangement should give results as good as those given by an ordinary oil-fired gravity hot water system.

W. B. H., Point Pleasant Beach, N. J.

A. You are 100% correct. In fact, years ago the method you describe was used widely. Before the forced-circulation method for converting old hot water systems to summer-winter operation became popular, hundreds of burner dealers used motorized valves in precisely the manner you describe. Lever-operated valves of the globe type or butterfly type were opened and closed by damper motors and similar motors connected to room thermostats. Today, however, most dealers use circulators and flow control valves instead, because using these gives the great advantage of forced circulation and, according to the dealers, costs the same or little more than using motorized valves. We suggest you check cost of labor and material for the motorized valve you describe.

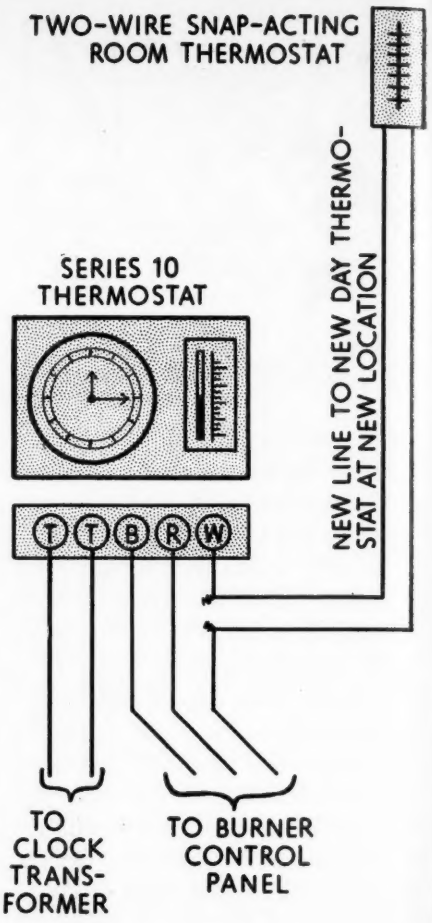
STEP UP TO THE Nu-Way
SALES PROMOTION COUNTER FOR '52
Nu-Way
OIL BURNERS
The "Bargain Counter" for '52 is now open. Here you'll be served the latest Nu-Way promotional material available . . . all designed to make your selling job easier.
NATIONAL ADVERTISING
Hard-hitting ads like the one on the right will be seen regularly in America's 4 leading home publications . . . reaching over seven million families. This ad will tell the "Bargain Hunters" simply and clearly why the Nu-Way Oil Burner will mean added savings now and in the years to come.
LOCAL PROMOTION
Nu-Way's "counter" also contains a fine supply of material for that important local advertising. A new four-page folder, attractively designed newspaper ad mats, window streamers, radio spot commercials, an eight-page booklet, etc. are offered to help bring the entire Nu-Way story right to your local market area.
Nu-Way Oil Burners are sold through jobbers and distributors. Also, special applications for furnace and boiler manufacturers. For details write: THE NU-WAY CORPORATION, Rock Island, Ill.
BARGAIN for your BASEMENT
Nu-Way
OIL BURNER for
MAXIMUM HEATING EFFICIENCY with the New Combustion Head, Positive Air Control and other features exclusive with Nu-Way.
MINIMUM OPERATING COST of the Nu-Way Oil Burner will mean smaller fuel bills . . . greater savings for you.
MODERATE FIRST COST and you're set for years of automatic oil heating comfort.
FREE BOOKLET with "Questions and Answers" regarding automatic oil heat. Ask your local heating contractor or write THE NU-WAY CORPORATION, Rock Island, Illinois.
OIL HEATING EQUIPMENT
"Automatic Oil Heat Exclusively Since 1921"

Q. Trouble of Protectorelay chattering came of my efforts to connect two Series 10 type room thermostats in series with each other on a job where either of two thermostats must be able to stop the heat. There must be a way to accomplish this simple requirement. But everybody in the trade that we ask the problem never heard of it and doesn't know the solution.

S. W. T., Dowagiac, Mich.

A. Don't try to connect a new Series 10 thermostat in series with the Series 10 thermostat already installed. Instead, install a new thermostat of the two-wire, snap-acting type. Simply cut the white wire that runs to the already-installed thermostat, and connect the new thermostat into this leg as the diagram shows.

We prepared this diagram for a reader who found he had installed a clock thermostat in the wrong location and did not want to move it. The heat went awry daytimes, in this building heated by a 125 horsepower steam boiler. Poor regulation of heat at night did not count, the reader said.


TWO-WIRE SNAP-ACTING ROOM THERMOSTAT
NEW LINE TO NEW DAY THERMOSTAT AT NEW LOCATION
SERIES 10 THERMOSTAT
T T B R W
TO CLOCK TRANSFORMER
TO BURNER CONTROL PANEL

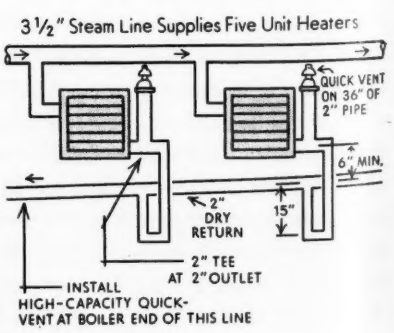
With the old clock thermostat set all the way up for daytime (80°), and the new two-wire thermostat set for 72°, control of the heat is transferred automatically to the new thermostat every morning. Set at 55° for nights, the clock thermostat still controls the building temperature nights.

* * *

Q. Your article, "Unit Heaters Stay Cold," see p. 70 of the August issue of FUELOIL & OIL HEAT, *says use a 15" water loop at the output of each heater, but fails to say how this is measured. Do you measure from the bottom connection of the heater, or where? How low is the dry return?*

B. F. C. Jr., Bethlehem, Pa.

A. This diagram shows two of the


3½" Steam Line Supplies Five Unit Heaters
QUICK VENT ON 36" OF 2" PIPE
6" MIN.
2" DRY RETURN
15"
2" TEE AT 2" OUTLET
INSTALL HIGH-CAPACITY QUICK-VENT AT BOILER END OF THIS LINE

There is only ONE
TRADE MARK REGISTERED
Draft-O-Stat
BAROMETRIC DRAFT CONTROL
AND HOTSTREAM MAKES IT!

INSIST ON Draft-O-Stat FOR BEST RESULTS ON EVERY OIL BURNER INSTALLATION

New Model "B" (illustrated) now available in 6, 7, 8, 9, 10 and 12 inch sizes. Write for Bulletin.

THE HOTSTREAM HEATER CO.
6925 QUINCY AVENUE • CLEVELAND 4, OHIO

unit heaters properly piped. The dry return slopes downwards towards the boiler, ½" drop per 10 feet of pipe, and at its highest point is 6" below the return connection of a unit heater. The loop itself is 15" as shown. Distances are measured between centerlines of the pipes. Don't split hairs in applying these dimensions. Where convenient, add or deduct an inch from the dimensions shown.

* * *

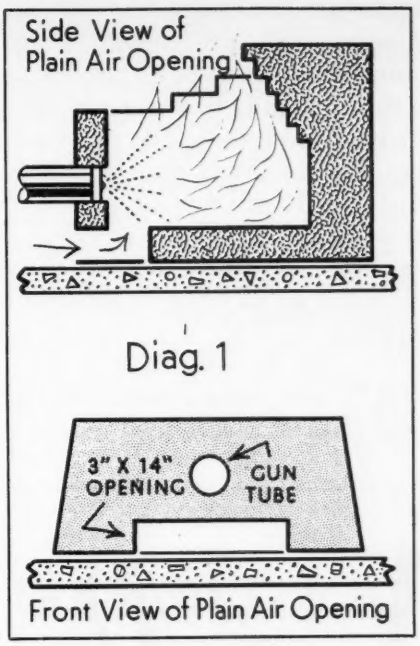
Q. We want to settle an argument about a gun burner job we are planning. Will fire between 16 and 20 gph; we are not certain about that right now. Not enough air for combustion comes from the blower in this burner, therefore to fire that hard we have to use secondary air, natural draft.

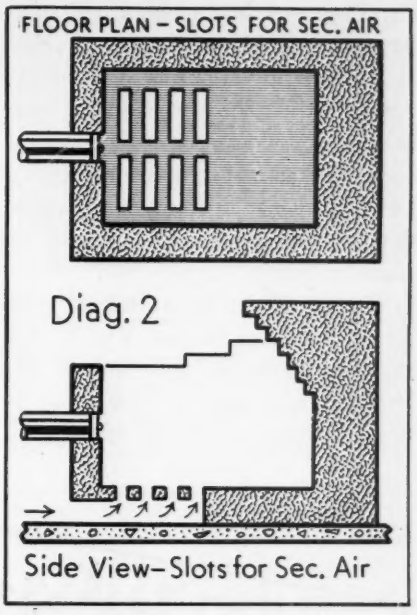
Our attached Diag. 1 shows a plain air opening in the front of the firebox, and our Diag. 2 shows a better design with slots in the firebox floor.

Our question #1: Will Diag. 2 save worthwhile amounts of oil over Diag. 1?

Question #2: Is the 3" x 14" secondary air opening the right size?

F. S. G., Philadelphia



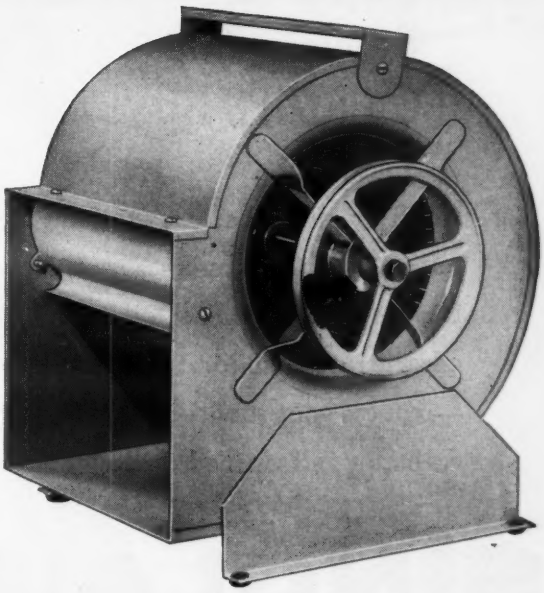


A. Your sketch indicates an excellent firebox that has very high side and back walls together with a decided corbel or step-in effect for the back wall. If with such a firebox you use an oilburner that has excellent air-handling parts, then using the superior slot-type secondary air passages will save little oil. With the plain air openings you should get high CO_2 readings with good, low smoke instrument readings. Despite this and in view of the possibility of your installing only an ordinary oilburner, your best bet is to use the slots for the secondary

Brundage . . . choice of leading furnace manufacturers

Highly regarded throughout the warm air industry—as evidenced by its use in dozens of America's best known makes of furnaces—is the Series "X" Blower Assembly. Included among the outstanding features of this sensational Blower by Brundage are UTMOST DESIGN FLEXIBILITY to answer your particular requirements . . . OVER-SIZE SHAFTING for continuous bearing life with virtually no servicing . . . SELF-ALIGNING SPHERICAL BEARINGS with increased oil reservoir . . . and sturdy FOUR-POINT SUSPENSION of bearing support bracket.

For greater efficiency in air handling—greater satisfaction in every way—investigate the widely accepted, skillfully engineered Brundage Series "X" Blower Assemblies. We'll be pleased to furnish complete engineering data.



Brundage also concentrates its production efforts on Blower-Filter Units, incorporating the Series "X" Blower Assemblies. These compact, all steel units are "tops" in profit potential and customer satisfaction.

Brundage COMPANY

Blower Specialists Since 1919

515 NORTH PARK STREET
KALAMAZOO 11, MICHIGAN

air. They may lead to improved combustion and lower oil bills, and probably will if the oilburner has just ordinary air-handling parts in its gun tube. Using slots, less smoke and oil vapor will spurt out of the secondary air opening in the front of the boiler during cold starts with little or no chimney draft.

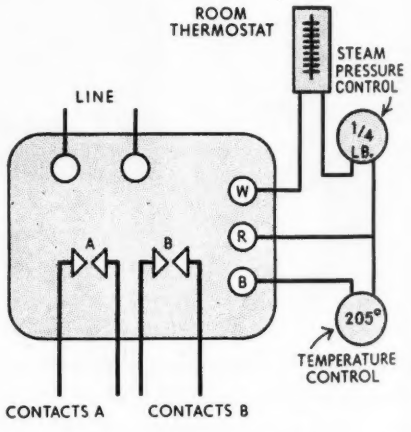
There's no definite answer to your second question because you do not say the maximum gph rate of the burner when only its blower air is used. Offhand, we'd say that the 42 sq. in. secondary air opening you are providing will give enough air by natural draft for about 7.0 gph. Using a burner properly rated at a maximum of 13 gph without the help of secondary air, you should then be able to fire up to 20 gph with the amount of secondary air you plan to provide. To install a larger burner that needed no secondary air for firing 20 gph would be better.

* * *

Q. I want simultaneous start and stop of two big oilburners firing two side-by-side steam boilers connected to the same radiator system. Want to use one room thermostat and one pressure control on steam header for both burners. But set at one-quarter pound, the steam control cuts in and out quickly, tries to re-start burners before both their stack controls have become ready to let burners start again. If no wiring diagram available, please tell where I can get information. If wiring diagram available, please publish.

D. W. E., Chicago

A. Here's diagram. Use Series 10 relay having two sets of contacts, "A" and "B." Wire contacts "A" to start one burner; contacts "B" to start other burner. Connect contacts line-voltage to each burner control panel feed line, or connect contacts low-voltage to each burner control panel thermostat circuit. Either way, when this Series 10 relay snaps "on," both burners start. The accurate, dependable temperature shown set at 205° is immersion type, installed in common steam header over both boilers. Relay cannot snap in until this temperature control chills. By setting this control



for an "enforced off period" of between five and ten minutes, as needed, you cause it to wait until both stack controls have chilled properly, before it attempts to re-start burners. Once this relay has snapped in because after a five or ten-minute wait the temperature control circuit has closed, the temperature control circuit can open without causing the relay to drop out. The way things work out, during coldest weather the temperature control will be starting the burners, and the steam pressure control will be stopping them.

RUST clogs filter screens and burner nozzles—it's a big reason for many customer complaints and service calls. But today, Sinclair Fuel Oil contains RD-119®, Sinclair's miracle rust inhibitor. Used regularly, RD-119 stops rust —reduces your service-call expense, helps keep customers happy and satisfied. Save money, save trouble with . . .

SINCLAIR
FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

New Products

Kleer-Kleen equips Burners with electric Ignition

ELECTRIC IGNITION is now an integral part of the vaporizing oilburners made by Kleer-Kleen. It is available on all 16 furnaces and heaters made by the company, with the electric head and control system similar to and convertible to pilot-type operation.

Charles Curtiss, president of Kleer-Kleen, explains that "By functioning only when needed, the electric ignition cuts down unnecessary fuel consumption . . . and does away with the inconvenience and danger of match-lit pilots." The system was developed specifically to eliminate service calls and minimize carbon formations on the burner.

Made by: Kleer-Kleen Mfg. Co., Oakland, Calif.

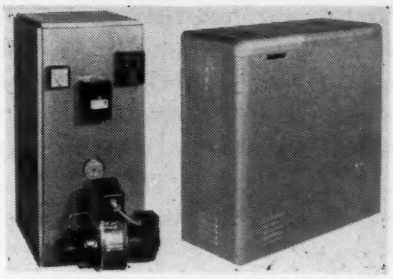
Atlantic "500" and "340" water tube Boiler-Units

ATLANTIC "500" is a horizontal water tube boiler, shipped complete as a package, including oilburner and 1¼" circulator. To operate it is necessary only to set the boiler in place, make necessary mechanical and electrical connections. Other equipment furnished consists of flush jacket with insulation bonded to its interior, refractory combustion chamber, high limit control, reverse acting Aquastat, thermostat and all necessary wiring and piping in place to complete assembly. It also has a 3 gpm tankless water heater.

The "340" is the same boiler, but not including the circulator, with flush or enclosing jacket, combustion chamber, combination pressure, altitude gauge and thermometer.

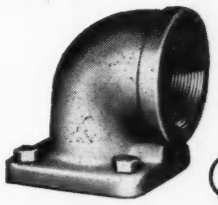
Both models have 19.5% sq. ft. of heating surface and are rated at 530 sq. ft. of hot water radiation—installed radiation at 150 Btu. Flange-mounted Atlantic oilburner, used to fire the units, has a capacity range from 0.85 to 1.25 gph. Boiler dimensions are 22½" high, 19" wide and 41" high.

Three other water tube boilers also are offered by Atlantic: No. 1517, 418 sq. ft. of steam capacity, 668 sq. ft. hot water; No. 1523, 544 sq. ft. steam, 870 sq. ft. hot water and No. 1530, 680 sq. ft. steam and 1088 sq. ft. hot water. All ratings are net. Heating sur-



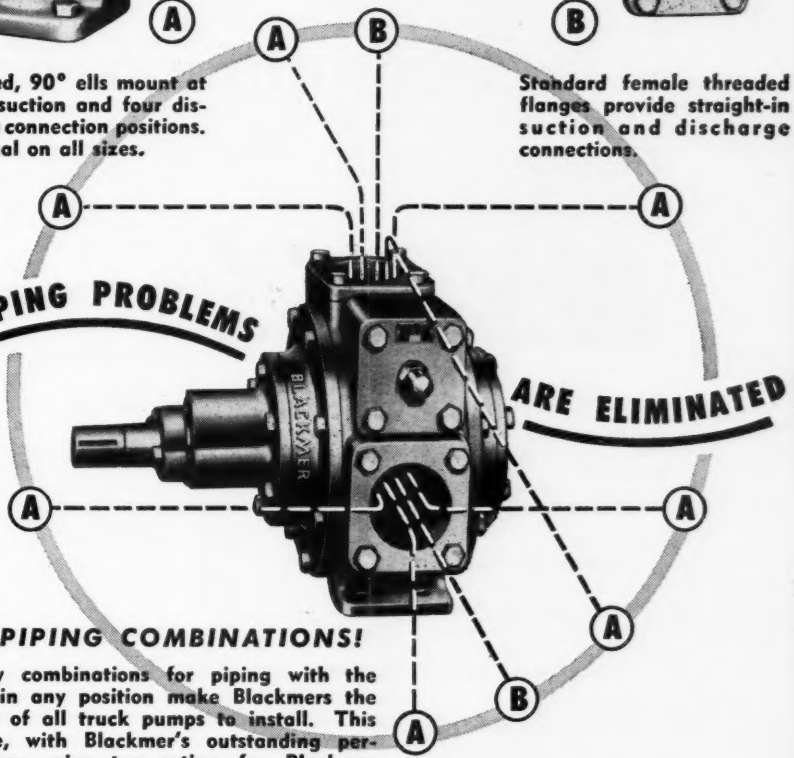
No. 500 No. 340

WHY BLACKMER TRUCK PUMPS ARE EASIER* TO INSTALL



Flanged, 90° ells mount at three suction and four discharge connection positions. Optional on all sizes.

Standard female threaded flanges provide straight-in suction and discharge connections.

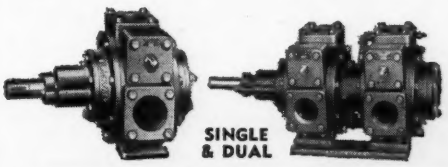


*PIPING PROBLEMS ARE ELIMINATED

20 PIPING COMBINATIONS!

Twenty combinations for piping with the pump in any position make Blackmers the easiest of all truck pumps to install. This feature, with Blackmer's outstanding performance, wins top rating for Blackmer Truck Pumps.

40, 60, 100 and 200 G.P.M. SIZES • WRITE FOR TRUCK PUMP DATA



SINGLE & DUAL

A look "inside" Blackmer Truck Pumps shows why owners appreciate these pumps. Write for Bulletin TP3.

BLACKMER PUMP COMPANY • GRAND RAPIDS, MICH.

faces for the three sizes are 24.6, 32 and 40 sq. ft. Each measures 19″ wide and 50″ high, 26″, 31″ and 38″ long, respectively. Flange-mounted gun type oilburners also are used with these sizes.

Made by: Atlantic Steel Boiler Co., Inc., 22d St. & Washington Ave., Philadelphia 46, Pa.

Monarch announces nozzle Selector and carrying Case

MONARCH is announcing a combination nozzle and firebox selector and nozzle capacity calculator. The slide rule device on one side provides information to permit the user to determine the correct size nozzle and firebox for a wide range of boiler and furnace loads, both for conventional air mixing equipment and for Monarch combustion heads. Conversely, it can determine how much gross load any nozzle size from .60 to about 10.0 gph will carry. There is also a chart giving recommended firing ranges for different size blast tubes from 3½″ to 5″ I.D.

The nozzle capacity calculator, on the other side of the rule, enables determination of the capacities of any size nozzle from .60 to 10.5 gph in 25 lb. pressure steps from 75 to 200 lbs. psi.

A third new item is an all metal nozzle box for holding 48 tips and strainers in plastic containers. It provides the serviceman with a convenient method of carrying nozzles safely and without having them jumbled in a tool box.

Made by: Monarch Mfg. Works, Inc., 2503 E. Ontario St., Philadelphia 34, Pa.

New draft Regulator added to Walker Line

NEW TYPE 342, a new addition to the Walker line of Junior Fuel Saver Automatic Draft Regulators, regulates for specific draft settings on a calibrated dial. One turn of the adjustment pointer gives adjustment of draft value from low to high. Draft settings are: Low . . . 02″ WG; Medium . . . 05″ WG; and High . . . 08″ WG. These values are clearly indicated for quick and positive adjustment. New Type 342 features the Walker supersensitive sealed box hinge pivots. This design banishes sluggish action and excludes dust, dirt and corrosion. The

New Fluid Heat *rotary conversion oilburner, being announced at the National Oil Heat Exposition, Philadelphia, April 14 to 18. This wall flame burner incorporates all tested advances in rotary equipment, plus a new beige and red jacket design developed by Bruce Kamp, well-known industrial designer.*

Made by: Fluid Heat Div., Anchor Post Products Co., Eastern Ave. & Kane St., Baltimore, Md.

important

announcement

from the

MAGNEX Corporation

We are proud to announce a new improved ignition transformer, with the following advantages:

1 Reduced operating temperature.

2 Lighter in weight.

3 Available with internal junction box.

4 Available in smaller can sizes.

5 Full radio and television shielding.

6 Mounting plate to suit any application.

7 Interchangeable for gas or oil burner.

We welcome your inquiries for standard or special requirements.

MAGNEX Corporation

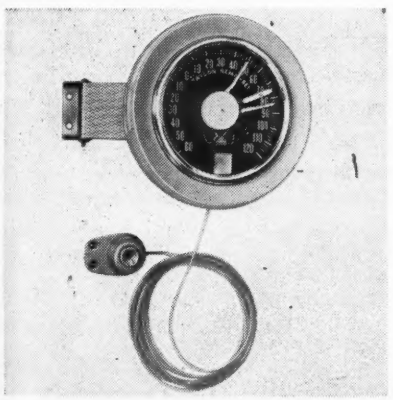
90-28 Van Wyck Expressway, Jamaica 18, New York • Telephone: AXtel 7-4400

bearing area is removed from the edge of the plate to insure a lifetime of sensitive action. The draft adjustment dial and assembly are removed from the area of corrosive deposits.

Made by: Walker Manufacturing & Sales Corp., 18th & Penn, St. Joseph, Mo.

Taylor Remo-Set is max-min Thermometer

TAYLOR NO. 5322 Remo-set maximum-minimum dial window thermometer is



particularly suited for compiling degree-day records. It offers remote resetting of the temperature indicators by push button, permitting the thermometer to be located away from the direct rays of the sun to record true air temperatures. It is encased in a weather-proof, beige plastic case and has easy-to-read ivory numerals on a green dial.

Rising and falling temperatures cause the pointer to move the high and low indicators to the temperature extremes, where they are locked in place under hair-spring tension by a ratchet mechanism. Maximum-minimum indicators are pneumatically reset by a yoke, operated by a rubber diaphragm and connected by vinylite plastic tubing to a push-button located indoors.

Made by: Taylor Instruments Cos., 95 Ames St., Rochester 1, N. Y.

Bell & Gossett new booster Pumps compact, space-saving

THREE NEW BOOSTER PUMPS comprise the line recently announced by Bell & Gossett. Specifically designed to provide a more compact, space-saving unit in residential and industrial hot water heating systems, despite their reduced size, these lighter units deliver a greater number of gallons per minute at a lower cost in electric power than their predecessors. Additionally, these circulators conserve critical materials and enable the production of more units from any given materials allotment.

Nos. 75, 100 and 125, ¾", 1" and 1¼" size respectively, are each powered by a 1/12 hp motor and recommended for residential installations or for zoned jobs where individual circuits are comparatively short in length.

Made by: Bell & Gossett Co., Morton Grove, Ill.

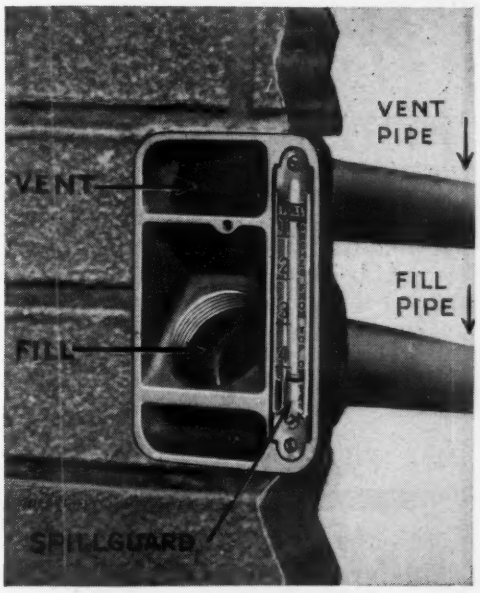
At Last FILL WITHOUT SPILL—TO LAST GILL

"PHILLY" FILL-VENT BOX with SPILL GUARD

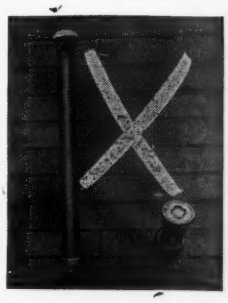
IN ONE COMPACT UNIT

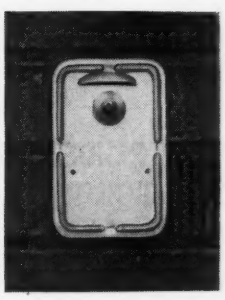
Fill to the *top* without spilling a *drop*, because SPILL GUARD shows the driver the height of oil in tank. It starts to register the exact contents, the instant the oil reaches the last four inches from top of tank. The SPILL GUARD is an unfailing hydrostatic gauge, right in front of his eyes. DELIVERS FROM 15 to 45 MORE GALLONS PER 275 GALLON TANK, PER TRIP. Save one or more trips per customer per season. Accepted by oil burner and oil companies for over 15 years — over 100,000 Fill-Vent Boxes in use.

(Patented and other patents pending)



"Philly" FILL-VENT BOX and SPILL GUARD with cover removed. See lower right photo for unit in closed position.





ORDINARY INSTALLATION:
1. FILLCAP
2. 45 DEGREE ELL
3. NIPPLE
4. 90 DEGREE ELL
5. VENT CAP
6. ALARM
7. PAINTING
8. LABOR ON ABOVE

"PHILLY" INSTALLATION:
1. FILL - VENT BOX and SPILL GUARD (Complete Unit)
2. APPROXIMATELY 1/3 OF USUAL LABOR

— and that's all!

PLASTIC APPLIANCE COMPANY
5311 Westminster Avenue
PHILADELPHIA 31, PA.

SOLD THRU SID HARVEY INC. VALLEY STREAM NEW YORK **ALL BRANCHES**

VISIT US AT BOOTH 356-1
OIL HEATING EXPOSITION
April 14-18
Commercial Museum, Philadelphia, Pa.

COSTS LESS

By combining fill cap, vent cap and warning gauge into one unit you *save on materials and installation time.* The simplified hydrostatic gauge costs no more than a whistle.

IMPROVE APPEARANCE

Sets flush. Compact. Rust proof. Tamper-proof, cover locks tight with Allen key.

OTHER FEATURES

No noise, fills faster. Read it in dark, always accurate, positive. Easy to install. And we repeat— *low in cost.*

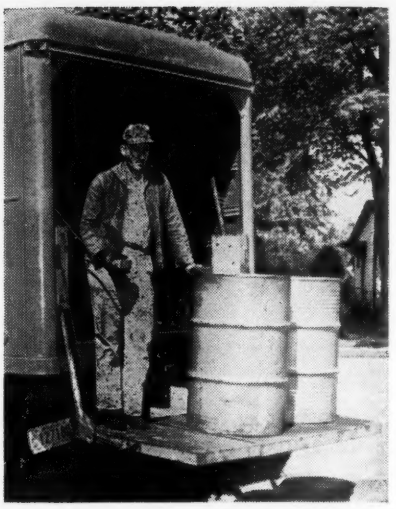
ATTACH TO LETTERHEAD AND MAIL

PLASTIC APPLIANCE COMPANY:
Send information and prices on the "Philly" FILL-VENT BOX and SPILL GUARD.
Name .....
Position .....
Type Business .....

Winkler electric Liftgate offered in three Models

THREE MODELS, with lengths from 44 to 90 ins., widths up to 42 ins., are available in the Winkler electric liftgate, adaptable to trucks from ½ ton pick-ups to semi-trailers. Capable of lifting up to 2,000 lbs., the all steel gate is built around the Winkler stoker inter-planetary transmission and a 6-volt starter motor, which convert power from the truck battery into hoisting capacity. Unit operates without the truck motor running. The liftgate weighs 390 lbs. without the end gate, fits all types of bodies, can be installed on the rear or side of the truck. Its entire mechanism is placed on the truck body, making it easy to change from one body to another.

Operator has positive control over the gate at all times through a flexible cable, permitting him to ride with the load or control it from ground or truck. The gate stops and locks in position when finger pressure is removed from the switch. Periodic check of oil level



in the transmission and oiling the starting motor every three months is all the maintenance required. Power opening and closing of the tailgate is included as an added feature.

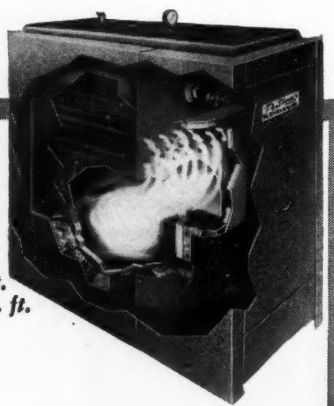
Made by: U. S. Machine Corp., Lebanon, Ind.

PROFIT-WISE heating contractors specify . . .

PORTMAR GAS OR OIL FIRED STEEL BOILERS

Meets every heating demand for steam or hot water

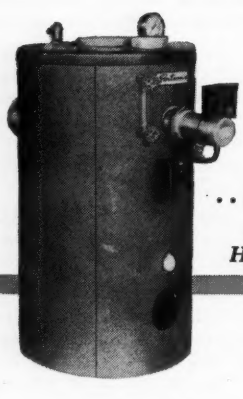
In-demand boilers that assure long range customer satisfaction, Portmar steel boilers operate at high heating efficiency—producing low cost heat and abundant clean hot water all year 'round. Priced "right" to meet a steadily growing market, contractors are discovering that Portmar boilers are *easier to install and amazingly trouble-free.*



WINDSOR STEEL BOILERS

horizontal tube series . . . with extended jackets

Steam: 320 to 3,000 sq. ft.
Hot Water: 510 to 4,800 sq. ft.



PORTMAR RESIDENTIAL STEEL BOILERS

vertical tube series . . . with flush or extended jackets

Steam: 320 to 1,100 sq. ft.
Hot Water: 510 to 1,760 sq. ft.

GUARANTEED PERFORMANCE ON EVERY JOB

- scientifically arranged heavy gauge steel, long life boiler tubes provides maximum heat transfer
- large furnace volume
- long gas travels permit complete absorbing of gases for high efficiency and economy
- attractively designed boiler jackets add beauty to basements
- large hot water tankless copper coil
- designed so that parts are easy to reach for proper cleaning
- tested with high hydrostatic pressure

Larger boilers made to order

Contact your jobber or write direct for literature and prices

"Engineered quality steel boilers for luxurious heating"

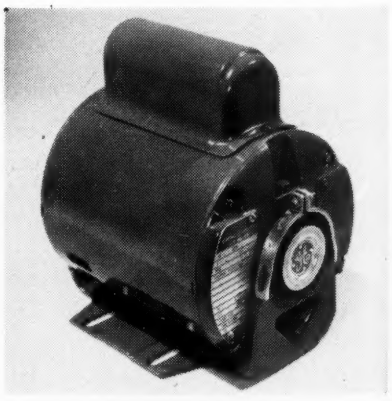
Portmar Boiler Company Inc.

193 SEVENTH STREET • BROOKLYN 15, N. Y.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL WATER HEATERS AND HEATING BOILERS • PORTMAR STEEL BOILERS • ROTARY WALL FLAME BOILERS

G.E. announces new Line of FHP Motors

DESIGNATED AS "FORM G," General Electric has announced a new line of fractional horsepower motors. The Form G motor weighs as much as 51 per cent less per horsepower than the



models it replaces and is considerably smaller in size. In addition, its versatility of application has been broadened and its appearance modernized.

The motors are available in open dripproof and totally enclosed fan-cooled models in Types K (polyphase), KC (capacitor start), KH (split phase), and KCP (permanent split capacitor). The design incorporates a new insulation system developed by G.E. especially for this project. It consists of a special nylon material with

wire and varnish to give the motors longer life.

Made by: General Electric, Schenectady 5, N. Y.

Coleman cooling Unit for Use with Blend-Air Heating

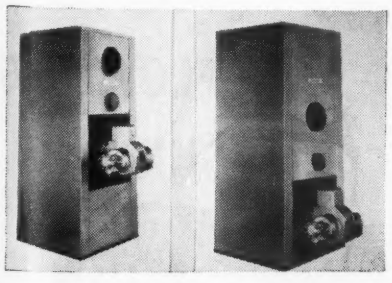
COLEMAN CO. has announced limited production of a summer cooling unit to be used with Blend-Air heating and ventilating systems. The cooler, offered in 2 and 3-ton sizes, fits on top of the Blend-Air furnace. At the turn of a damper the system can be switched from winter heating and ventilation to summer air conditioning. The cooling unit uses the same 3½" ducts used for heating, and distributes cooled air through the blenders that replace conventional registers.

Government-imposed restrictions on materials will limit this year's production of the cooling unit to 500, most of them to be channeled into areas having high summer temperatures and high humidity conditions.

Made by: The Coleman Co. Wichita 1, Kan.

Ducane furnace Line includes eight Models

THE DUCANE line of oilfired furnace-burner units is made up of eight models, delivering 75,000 or 100,000 Btu/hr at the plenum. Each is equipped wih a heavy gauge, steel, all-welded heat exchanger, in which hot gases



from the steel combustion chamber travel upward and through horizontal heat transfer tubes. Machined steel, gravity close, asbestos gasketed observation doors on all models also serve as pressure-relief openings. Flange-mounted oilburners are used.

The model B and LB are low-boy models, the former with the blower installed in a compartment at the bottom of the unit, the other with the blower placed in a compartment at the rear. Model J is a high-boy model, with model C of similar construction, but employing the counterflow principle. Each model is made available in both sizes.

Made by: Ducane Heating Corp., Lincoln Park, N. J.

Firewel A-70 Furnace for the small home Market

FIREWEL A-70 furnace is offered as a unit designed for the small, low-cost home. It may be gas or oilfired, the oilfired models being equipped with a 3-speed selector switch for adjusting blower speed and a manual switch for summer air circulation. Return ducts may be installed in any of three sides or the bottom of the furnace. Measuring 14" in diameter, the unit is built with a 14-gauge heat exchanger and internal radiator.

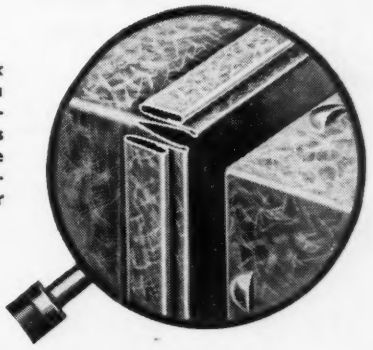
Standard equipment on the packaged and completely wired A-70 includes fan controls, thermostat and safety controls. An air filter is optional. Btu output at the bonnet is 70,000;

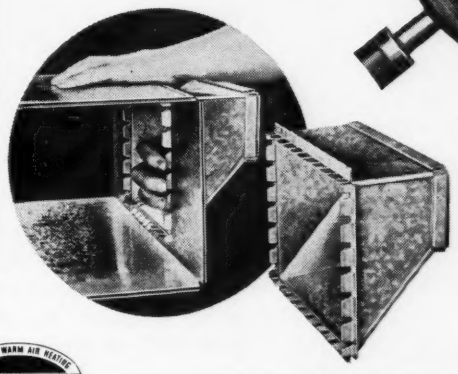
Now It's EASY...and PROFITABLE to do your own ductwork with ADELTA Standardized Fittings

You can make more profit on every warm air job when you use easy-to-assemble ADELTA standardized ducts and fittings. There's no need for special sheet metal equipment or highly trained personnel. Adelta precision-made fittings—with exclusive time-saving features* like those illustrated—make it easy for you to do the whole job quickly . . . more profitably.

Here's proof:

Our exclusive One-Piece Snap-Lock Cleat is featured on all Adelta units, including take-offs and reducers. Just push two sections together, and presto!—you have a rigid, leakproof joint . . . without any crimping, notching or drilling to slow up the job.





Adelta's pre-notched collar edges save time on every collar connection. No bothering with snips, pliers and hammer. Just push the collar edges closed with your fingers to get a tight, permanent connection.

Write today for the Adelta 1952 catalog.

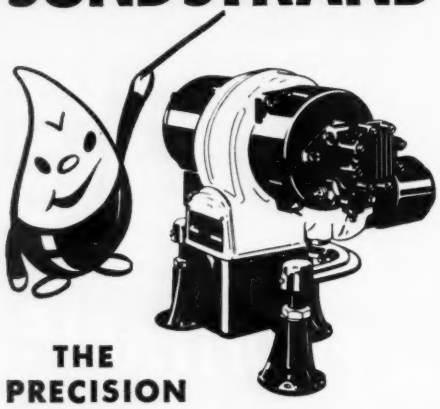
INDOOR COMFORT

ADELTA MANUFACTURING CO., INC.

Standardized Pipe, Duct & Fittings for Warm Air Heating

2101 Ellsworth Street Philadelphia 46, Penna.

YOU'LL GET
MORE SALES
WITH
SUNDSTRAND



THE PRECISION BUILT
Sundstrand All Electric
OIL BURNER

ATTRACTIVE
Modern, functional design, with no cumbersome "extras"

DURABLE
Sturdy construction for long wear under any conditions

ECONOMICAL
Built to provide low initial cost and low operating cost

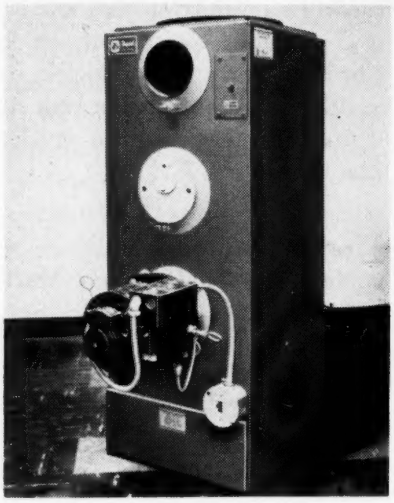
DEPENDABLE
Reputation for trouble-free operation throughout the years

QUIET
Heavy housing and cushion-mounted motor eliminate noise

A complete line, with consumer acceptance and a burner for every job. For full information write:

SUNDSTRAND
ENGINEERING CO.
ROCKFORD, ILLINOIS, U.S.A.

. . . . New Products



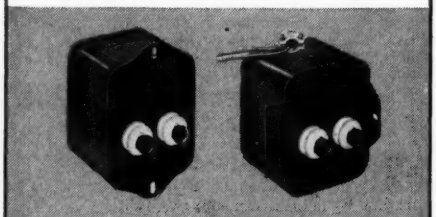
measurements are 18" wide, 18" deep and 48" high.

Made by: The Firewel Co., Inc., 3685 Broadway, Buffalo 25, N. Y.

Anchor makes Oilburner designed for commercial Use

ANCHOR MODEL SA5, an oilburner designed for large commercial and small industrial installations, has been introduced recently by Anchor Div. It features an adaptation of the Shell Com-

always specify
UNIQUE IGNITION TRANSFORMERS
for dependable performance!
UL



• Standard mountings or designed to meet your specifications.
• Radio shielded and adaptable to any oil burner installation.
• Unconditionally guaranteed against mechanical and electrical defects. Write for details today!

UNIQUE ART MFG. CO., INC.
Makers of Quality Products Since 1910
200 WAVERLY AVENUE,
NEWARK 8, N. J.

THE ONLY ONE-PIECE RUBBER FLEXIBLE COUPLING

with FLOATING BUSHINGS

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Our 25th Year

FLEXIBLE COUPLING
MFG. CO.
8145 South Dobson Avenue
Chicago 19, Illinois

bustion Head. Capacity ranges from 5 to 10 gallons #2 fueloil per hour.

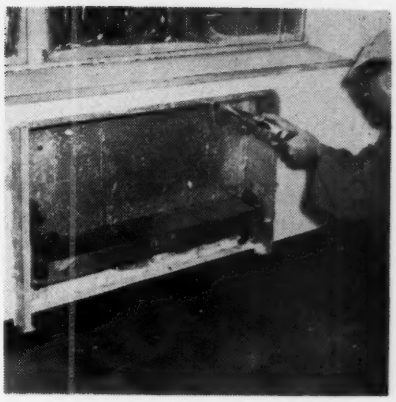
Anchor Model SA5, measures 28¼" wide and 35½" deep. Height is adjustable from a minimum of 24" to standard 26¼". Strong, heavy cast frame construction minimizes vibration and safeguards all working parts. The Anchor unit is equipped with a two-stage Sundstrand fuel unit. Cutoff is provided by a delayed-action magnetic solenoid valve.

Made by: Anchor Div., Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind.

Drive-It "300" is powder-actuated Tool

DRIVE-IT "300" is a powder-actuated tool for fastening steel, wood or composition materials to wood, steel or concrete. It has particular application in hanging pipe, fastening convectors and air conditioning ducts. The tool consists of a firing mechanism, barrel and safety pad assembly. To install a fastener, it is placed in the barrel with the power cartridge and the barrel is assembled to the firing mechanism. When the barrel is placed at the point of fastening, the tool pressed forward and the rubber handled turned, the fastener is driven into the surface.

The safety pad is mounted on a swivel plate so that it can be adjusted for making corner or wall installations and is constructed to surround the fastening area and protect against dirt or dust that may be dislodged. The pad is replaceable and is positioned on the barrel to permit extension into deep recesses, such as in junction boxes, and still permit the pad to perform its safety function. Only one size power



load is used with Drive-It "300," power variation being achieved with control plugs.

Made by: Powder Power Tool Corp., 0719 S.W. Woods St., Portland 1, Oreg.

Hy-Duty Utility Blowers designed for compact Areas

HY-DUTY UTILITY BLOWERS single inlet type are made by Schwitzer-Cummins and are built especially for smaller volume, low pressure uses where a large amount of air is required for a small, compact unit. Two sizes, 5" and

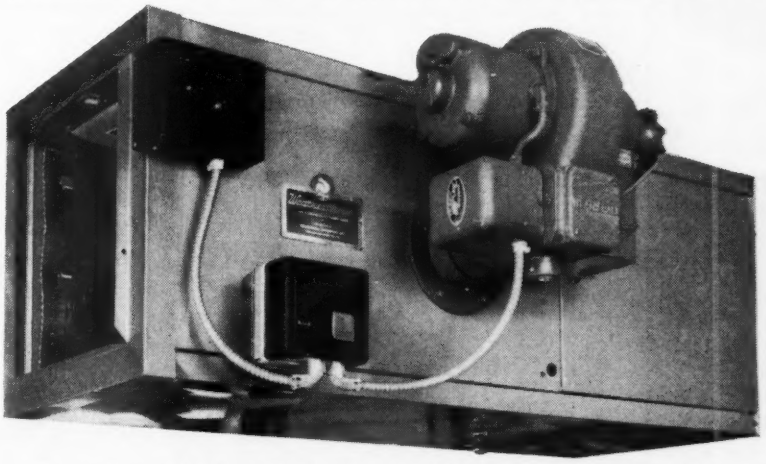
WEATHERTHERM DIRECT-FIRED OIL HEATERS

LO-BOY MODEL SUSPENDED UNIT HI-BOY MODEL

Domestic Units 80,000 To 450,000 B.T.U.—Industrial 400,000 To 2,000,000 B.T.U.

Each Domestic unit will be shipped assembled, the oil burner being shipped separately. Model AL Flanged Burner—Supplied on all Domestic units.

SUPERIOR CONSTRUCTION



QUIET OPERATION

ALSO Domestic and Industrial Conversion Oil Burners 1 to 35 G.P.H.
Steel Boiler-Burner Units—3 Pass Horizontal or Single Pass Vertical

WRITE FOR NEW CATALOG

Weatherall Engineers

INCORPORATED
387 CHARLES STREET, PROVIDENCE 4, R. I.

MANUFACTURERS OF QUALITY HEATING PRODUCTS SINCE 1928

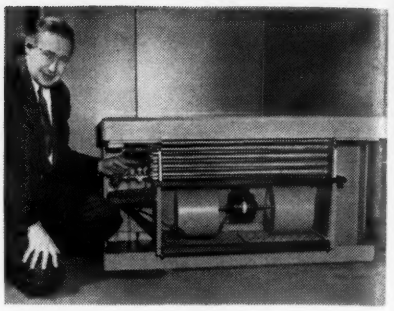
8½" cover a range of air deliveries up to 400 CFM.

The blowers are built entirely of steel. Exhaust opening is large and rectangular so ducts can be easily constructed and fitted on. The collar is welded around the inlet opening for easy attachment of an inlet duct. The blower wheels are made with separate blades, riveted into the back plate and end ring.

Made by: Schwitzer-Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.

Remotaire unit for Heating and Cooling

AMERICAN-STANDARD's Remotaire units have been designed for multiple installation, connected to centrally-located water heating and cooling plants, to provide summer cooling and winter heating. Remotaires can be installed in either a free standing or recessed position under most windows. To meet the needs for large and small rooms, two sizes are made. The larger model is equipped with twin centrifugal fans



to deliver 400 cfm, the smaller model delivers half that volume with a single fan.

Chilled or heated water, depending upon the season, is pumped from a central location through a simple piping system to finned tubes in the Remotaire units. Circulating air passes around these tubes to be heated or cooled and then distributed itno the room. Ventilation air comes from outside the building through a wall aperture, eliminating the need for ductwork.

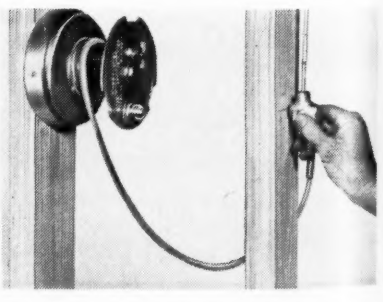
A control valve on the Remotaires permits complete water shut-off to the coils. The unit then can be used to circulate filtered, fresh air. Four standard control packages are furnished for the units, which can be used in new or existing buildings.

Made by: American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.

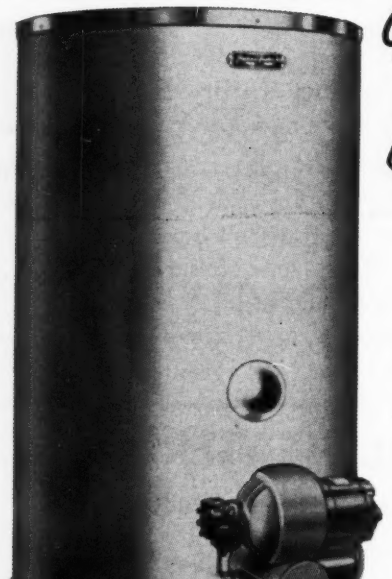
Hydrolevel operates on hydrostatic Principle

HYDROLEVEL, new leveling instrument, operates on a hydrostatic principle and is flexible enough to permit leveling over and around obstructions and in difficult locations. Made principally of aluminum and clear plastics, it is compactly designed and comes complete with a metal cover.

The device consists of a reservoir, filled with a solution of two-thirds water, one-third Prestone, a reel with a 40ft. plastic tube, scriber valve, vent valve and level sight. The reservoir is



SHEPHARD BOILERS & HOT WATER HEATERS



Give You...

PROVEN PERFORMANCE PLUS . . .

INSTALLATION PROFITS

Here is your answer to the small home market . . . The SHEPHARD Boilers and Hot Water Heaters incorporate the *Percolating Action* that gives continuous efficiency and economy. This action prevents the deposit of lime, scale and sediment on heating surfaces. When you sell and install SHEPHARD Units you offer your customers . . .

Check the many SHEPHARD Features:

- ASME Code Construction
- Removable Screw Type Fittings
- Heavy Boiler Plate Construction
- Two Inch Rock Wool Insulation to eliminate Stand By Loss
- Hydrostatic Tested—300 lbs.
- All Copper Coil Tankless Heater for Domestic Hot Water
- Six Different Sizes
- Standard Size Fittings

● CONVENIENCE

The convenience of having plenty of hot water; winter or summer. That's a real blessing to any family and a good sales point.

● COMFORT

Thermostatically controlled, the SHEPHARD *Percolating Action* will keep your Customers' Homes "as snug as a bug in a rug." Add to this the important feature of . . .

● ECONOMY

All this comfort and convenience is your customers for a small initial cost while the *Percolating Action* of SHEPHARD Units show economies of 35% to 85% in fuel. All these advantages add up to SALES and MORE INSTALLATION PROFITS FOR YOU.

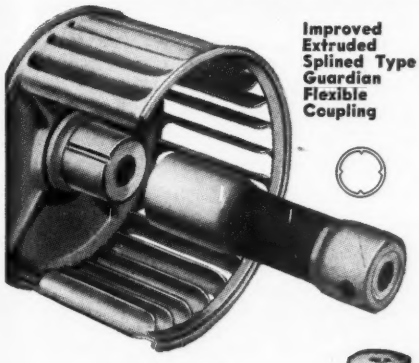
SHEPHARD Percolating Action

Wire or Write Today — *You can qualify as an exclusive dealer or jobber in your territory. Send for full information and prices.*

Shephard HEATER CO. INC.

951 SYCAMORE AVE., TERRE HAUTE, IND.

NEW...
IMPROVED
Guardian
FLEXIBLE COUPLINGS



Improved Extruded Splined Type Guardian Flexible Coupling

with

"DYNA-LINE"
Fabrication

"They are made while running true"

Improved Set Screw Type

You get extra benefits and superior performance when you specify the NEW Guardian Flexible Couplings with "Dyna-Line" Fabrication.

"Dyna-Line" Fabrication is an exclusive Guardian process in which all three components of the coupling are locked in final, exact inalignment position on rotating mandrels during the last critical stages of fabrication. The end fittings do not become solidly engaged to the flexible center member until all parts are fully aligned on a common axis.

Greatly improved performance results from "Dyna-Line" Fabrication under the dynamic conditions of actual operation. Vibration, strain and objectionable noise are greatly reduced.

New sizes, recently developed, have broadened ranges of torque capacities available in the superior Guardian line. This was made possible by the use of a flexible element reinforced with a synthetic fiber and new dimensional and design specifications.

All Guardian couplings, both the regular setscrew type and the splined sleeve type now incorporate these new features for improved performance and increased life.

Write for complete data.

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Guardian
PRODUCTS CORP.
COUPLING DIVISION

Dept. F-42, 1231 E. Second Street

Michigan City, Indiana

hung at one location, establishing the liquid level. When the gauge line is matched with this level, all inscribed marks then are level with each other.

Made by: Hydrolevel, 53 DeSoto Ave., Ocean Springs, Miss.

Acme Heating Division adds furnace burner Unit

ACME DUAL-AIRE warm air furnace has been announced as a companion to the Acme Dual 8 and Dual 6 boiler-burner units. Available in three capacities, 80,000, 120,000 and 135,000 Btu/hr, the units may be furnished in two cabinet designs, high boy or low boy, depending on the installation space.

Just as Acme boiler-burner units utilize patented stainless steel intensifier tubes and fire tube baffles for peak efficiency, so the Dual-Aire features a new principle of furnace design for similar performance in warm air systems.

Made by: Acme Heating Div., United Tool & Die Co., West Hartford, Conn.

AN OUNCE OF PREVENTION

is worth a POUND of CURE

This old adage was never more true than in the case of leaking connections. You know what damage they can cause . . . what they cost to repair.

Rectorseal #2 is the ounce of prevention you need to prevent such leaks. Thin in the can for quick, economical, easy application, Rectorseal #2 thickens in the joint to a plastic elasticity that maintains a perfect seal for the life of the connection. It has been proved by more than 15 years use by the oil industry. SEND FOR FREE SAMPLE. Prove to yourself that Rectorseal #2 is the finest sealing compound you ever used.

RECTORSEAL, Dept. O
2215 Commerce St., Houston 2, Texas

RECTORSEAL
Patented. Trade Mark Reg. U. S. Pat. Off.
NUMBER TWO

POWERFUL
VACUUM
FURNACE CLEANER
AND
POWER BLOWER
AT
LOW, low price
$111.65

Here's the vacuum that gets you into the cellar at the lowest price; allows cheap cleaning jobs to develop into profitable service work. The Pullman Vacuum is inexpensive, powerful, portable and has no outside bag. It will handle home boilers and small industrial jobs. The complete unit of efficient universal motor, life-lubricated bearings, electro-welded steel container, capacity 1½ bushels, baked enamel finish, plug-in casters, 35′ cord, 10′ hose and 27″ crevice tool is only $111.65. Send for name of nearest distributor. Jobber inquiries invited.

OIL HEAT INSTITUTE OF AMERICA OHI

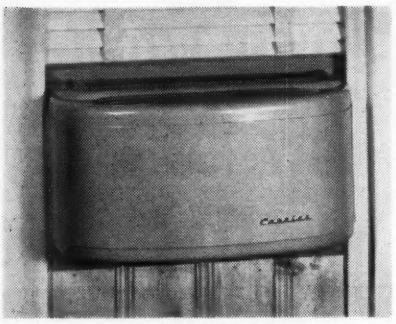
USE to blow out fuel tanks, clean air ducts, registers, beams, floors and in shop maintenance.

Pullman

PULLMAN SALES CORP.
MFR: BOSTON 19, MASS.

Carrier window Cooler rated at 1/3 hp Capacity

CARRIER'S new, low-priced 1/3 hp window sill room air conditioner has been developed to meet a growing demand for use in small offices, bedrooms



and other spaces where cooling loads are not large. The new model is similar to other Carrier units in every respect, except for capacity, including vibrationless hermetic compression, heavy gauge cabinet and 5-year warranty.

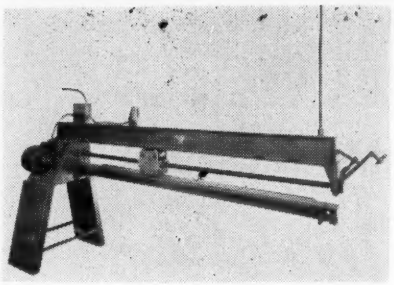
Unit is being produced in a newly developed pearlescent finish and window mountings are equipped with a special weatherproofing seal. Simplified fingertip controls can be set for cooling and dehumidification, with either outside or room air, or for ventilation only with filtered outside air. Carrier's Humitrol, which provides greater dehumidifying action on excessively humid days, is available as an optional accessory.

Made by: Carrier Corp., Syracuse, N. Y.

Machine which joins sheet Metal offered by Standard

THE STANDARD POWER GROOVE SHEET METAL JOINER is made to automatically seam sheet metal of any thickness from 18 to 30 gauge. The unit, in 40 seconds, exerting 11,000 lbs. psi, permanently seams two sheets of metal. Working from pressure derived from force which the roller assembly exerts against an overhead structural steel beam, the Joiner travels in one direction, automatically reverses direction and in its final operation smoothes the seam.

Square or round piping or straight seaming can be handled by this ma-



chine. The unit, which is almost silent in operation, can take any piping up to 8 ft. in length. The Joiner, itself, is only 10 ft. overall.

Made by: Standard Power Groove Machine Corp., 99 Hudson St., New York 13, N. Y.

One-Cote Cement for insulating, finishing

EAGLE-PICHER One-Cote is a quick-setting, rust-inhibitive, combination insulating and finishing cement for temperatures up to 1000° F. It is a dry fibrous material with a mineral wool base, which will not soften in rain or unusual atmospheric conditions two hours after application. The illustra-

STOP THAT FUEL OIL SMELL
PROTECT YOUR PROFITS
• REDUCE NUISANCE SERVICE CALLS 25% & MORE
• SAVE AND SATISFY CUSTOMERS
A LITTLE GOES A LONG WAY
NEUTRODA
to banish odors from oil spills & leaks
FUEL OIL ODOR NEUTRALIZER

PAT. PEND. C 1951

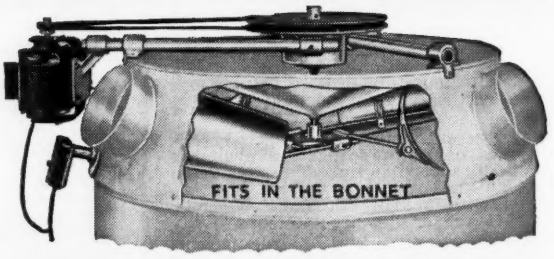
Just sprinkle it on. Odors vanish quickly, completely. Stops odor at source. Removes most oil stains. Reduces nuisance calls by 25% and more, avoids customer complaints about spillage odor. Where leak is inaccessible, dilute Neutroda and pour or spray onto leak. Odorless, non-inflammable, non-corrosive, non-toxic, non-irritating. SATISFACTION GUARANTEED.

AND FOR TANK LEAKS. Stop them quickly and easily with famous . . . **TANKITS**

SEE THE TANKIT CO. DISPLAY—BOOTH #756-1, O.H.I. EXPOSITION

THE **TANKIT** COMPANY
17 SHEPARD AVE., NEWARK 8. N. J.

Convert Gravity Furnaces With A CIRCULATAIRE Bonnet Blower



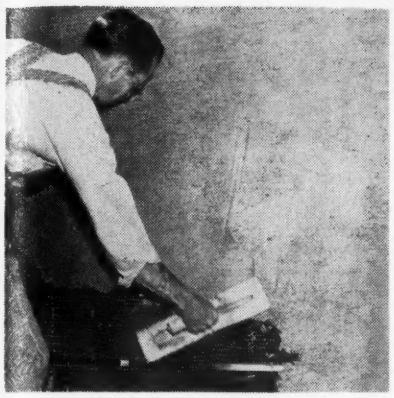
CIRCULATAIRE ELIMINATES COLD ROOMS, BALANCES HEAT DISTRIBUTION, SAVES FUEL

CIRCULATAIRE solves the problem of "hard to heat" rooms, boosts warm air quickly through all the heating pipes. CIRCULATAIRE is easily and quickly installed without removing the bonnet. Packaged unit includes motor and fan control. No new sheet metal work required, no changing of cold or warm air pipes, no baffles to be built. The CIRCULATAIRE is rigid, quiet and efficient in operation.

NOW READY — *New CIRCULATAIRE Sales Aids add effectiveness to selling interview, conserves valuable selling time and increases sales.*

A COMPLETELY PACKAGED UNIT
Nothing for the dealer to furnish except limited amount of labor.

GET THE FACTS TODAY! WRITE...
CIRCULATAIRE DIVISION OF CORLETT-TURNER CO.
1001 S. KOSTNER AVE., CHICAGO 24.



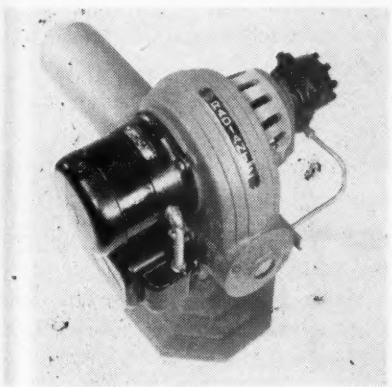
tion shows how it is put on the outside of a tank, applied to the desired thickness in one coat. When used outdoors or in exposed locations, it is recommended that a permanent weather protective coating be added.

One-Cote can be used on valves and fittings, storage tanks, boilers, hot air ducts, piping, air preheaters and many similar applications. The product is clean and non-irritating, has low shrinkage, forms a good bond to insulating blocks and dries to a smooth, firm, crack-free surface. Mixed and applied as recommended One-Cote covers 140 sq. ft., ¼" thick per 100 lbs., and may be painted easily.

Made by: The Eagle-Picher Sales Co., American Bldg., Cincinnati 1, Ohio.

Radiant adds new Model to its gun burner Line

MODEL 2½ SP has been added to the Radiant line of gun type burners, re-



placing model 2½ M. The new burner has a capacity range from 3 to 6 gph and conforms to the same specifications as the others in the line.

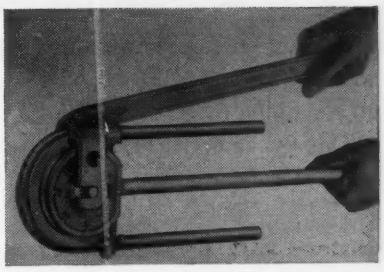
For ease of servicing standard parts are used.

Made by: Radiant Utilities Corp., 8817—18th Ave., Brooklyn 14, N. Y.

Combination tube Bender bends two tubing Sizes

A COMBINATION TUBE BENDER that bends both ½" and ⅝" O.D. copper, aluminum, brass and other soft, thin-wall tubing is being offered by Imperial Brass Co. The bender has a dual size shoe and mandrel which permits bending two different sizes of tubing without changing any parts.

Bender is of two piece construction and comes apart and slips over the tube at the point where the bend is needed.



It can be used to bend tubing where one end is connected as easily as it can be used to bend tubing that has both ends free.

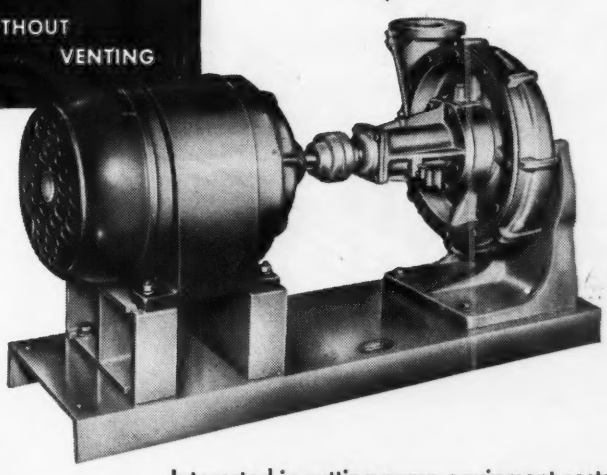
Bends can be made to any angle up to

POSITIVE SELF-PRIMING

STARTS WITHOUT PRIMING

RUNS WITHOUT VENTING

ROTO-PRIME



Interested in cutting pump equipment costs 30 to 50%? Here's your answer—the Gilbarco Roto-Prime Centrifugal, the versatile pump for more than one job. Because it handles liquid, air and vapor, Roto-Prime serves in both transferring and loading. No priming required because this pump automatically evacuates any air or vapor present in the line either at the start, finish or during the run. Simple construction cuts down servicing headaches and maintenance bills. And Roto-Prime's careful engineering assures quality performance and longer, more efficient pump life.

A complete centrifugal pump unit — base, electric motor, coupling, and mechanical seal. For the complete story on Gilbarco Roto-Prime Pumps, write today.

Gilbarco

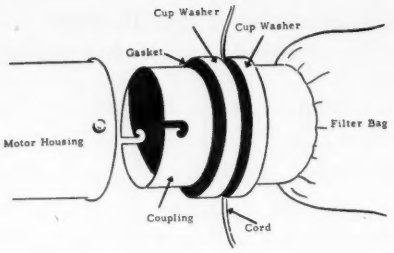
Gilbert & Barker Mfg. Co. West Springfield, Mass., Toronto, Canada

180 degrees. Tool calibrations show degree positions. Overall length is 21" and weight is 3 lbs. Bender is of steel and aluminum construction.

Made by: Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.

Master-Craft Coupling for vacuum Cleaners

MASTER-CRAFT has announced a leak-proof bag coupling for furnace and boiler vacuum cleaners. The filter bag is connected in the usual manner to the



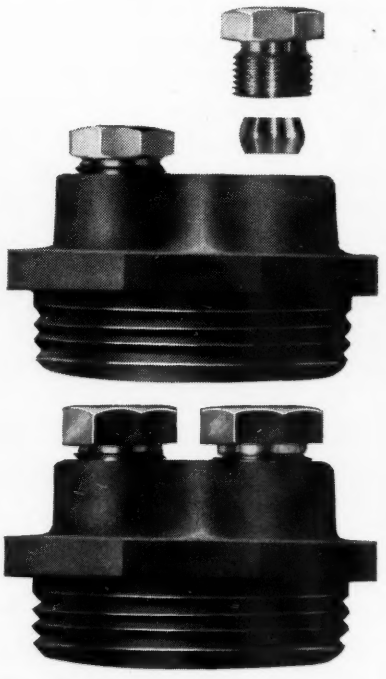
coupling, which has two cup washers affixed to the body of the coupling, with a space in between them.

When a cord, furnished with the coupling, is wound around the coupling, between the cup washers, they are spread and insure a tight connection between the bag coupling and motor housing.

Made by: Master-Craft Supply Co., Inc., Haverstraw, N. H.

OEM develops two new tank Bushings

A DUPLEX SLIP-THRU tank bushing is one of two new models developed by OEM. Designated Fig. #400, the Slip-thru is made of semi-steel gray iron, has a brass compression nut and a patented sleeve to assure tight connections. Bottoms are tapped for either a



rigid suction line or a suction guide. It is intended for underground tank installations.

A duplicate bushing machine cast of Zamac, a zinc alloy, is designated Fig. 381-A and is recommended for basement or aboveground tanks. Both types are made in 2" x ⅜" x ⅜" and 2" x ½" x ½" sizes.

Made by: Oil Equipment Mfg. Corp., P. O. Box 19533, New Haven 6, Conn.

Hoover Motors have Condensers in mounting Base

NEW HOOVER capacitor-start integral hp motors no longer will have condensers mounted on the exterior surface, but instead will house them with-

(*Please turn to page 218*)

CERAMIC REFRACTORIES

The Gem Clay Forming Company

SEBRING, OHIO

Established 1907

Telephone: SEbring 8-6141

GALONGAGE...

FOR TOP PERFORMANCE

Galongage is designed to meet the most exacting requirements and do credit to the finest installation. Quality construction practically eliminates unprofitable service calls and bothersome adjustments.

When making replacements or checking oil burners install Galongage for greater efficiency and customer satisfaction. Approved by Underwriters' Laboratories.

Write today for full particulars.

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS

International

A high grade lever arm type gauge to team with . . .

Galongage

- Flexible float arm
- Rugged and durable
- Has largest numbers calibrated in eighths

Assembled oil-tight at the factory, *International* saves installation time and eliminates the possibility of leakage due to "on-the-job" assemblies.

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS

for EASY INSTALLATION QUIET OPERATION

LOVEJOY

Type UX Double Flex FLEXIBLE COUPLING

Quickly and easily installed in dark or close quarters, Lovejoy Flexible Couplings can't fall off when blower or pump units are serviced. Rubber center unit increases flexibility and eliminates noise. Positive correction for misalignment, shock, vibration, backlash. Most fan manufacturers supply blowers with Lovejoy jaws on blower hubs at no extra cost.

Write today for complete Lovejoy Catalog

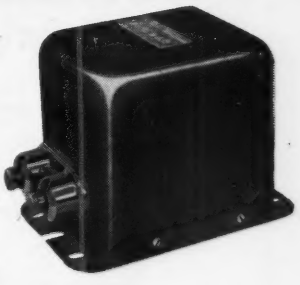
LOVEJOY FLEXIBLE COUPLING CO.

5012 W. Lake St. Chicago 44, Ill.

Also mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions.

DONGAN TRANSFORMERS

LEADERS IN THE OIL-BURNER FIELD



Dongan was among the first to build transformers for oil burners. In fact, the Dongan was the first transformer approved by the Underwriters Laboratories for oil-burner ignition.

Equip your oil-burners with Dongan Transformers. There is none better—regardless of price.

Voltages from 5,000 to 20,000.
A variety of sizes and mountings

WRITE FOR *Literature*

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.
"The Dongan Line Since 1909"

Largest burner Show

(*Begins on page 67*)

marize "The manufacturer viewpoint." After the talks questions will be received from the floor to be answered by a panel made up of the speakers.

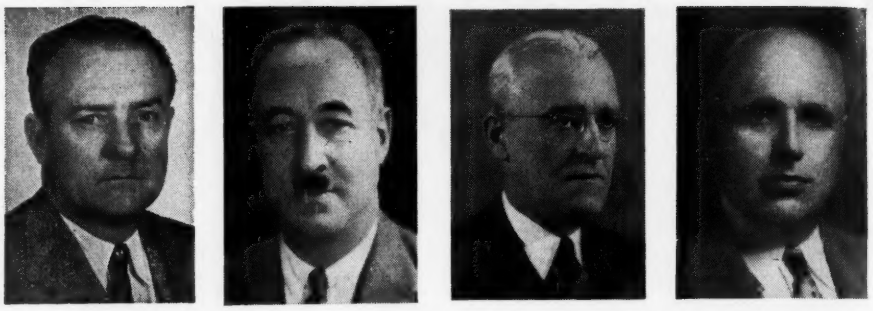
In the afternoon of April 16 the Commercial-Industrial Committee will meet after a luncheon. C. T. Burg, Iron Fireman Mfg. Co. and chairman of the Committee, will conduct the meeting, which is open to everyone interested in commercial-industrial oilburning.

There is to be an engineering committee report by B. K. Breed, Preferred Utilities Mfg. Corp., and a discussion of Government controls and the outlook for materials by Paul Holmes, Deputy Administrator, Construction Materials Div., NPA. Robert Gray, editor, FUELOIL & OIL HEAT, next will speak on the trends and outlook for industrial fueloil and commercial-industrial oilburner sales. Other subjects being prepared for the agenda include correction of residual fueloil specifications, definition and nomenclature for classification of sales, dealer's viewpoint, manpower problems, advertising and sales promotion.

The Accessory Division is holding its annual luncheon on April 16, also, with Senator Homer E. Capehart (R., Ind.) to appear as principal speaker. Chairman C. L. Hastings will preside. Senator Capehart, elected to the Senate in 1944 and re-elected in 1950, is a member of the Senate Interstate and Foreign Commerce Committee and the Senate Banking and Currency Committee. He is most noted, probably, for his recent Capehart Amendment to the Ceiling Price Regulations, an escalator arrangement for adjustment of ceiling prices to compensate for added costs since the Korean War.

Chapter Secretaries of the Distribution Division will hold their annual dinner at 6:00 P.M. on April 16 at

Dealer Day Session



From left to right: *J. H. B. Albert, chairman of the Distribution Division and chairman of the Dealer Day Session; Lionel L. Jacobs, moderator at the Session and speakers Joseph W. Butler and C. M. Blickensderfer. Also booked on the program are Frank J. Boyce and Leslie A. Falk.*

wanted!

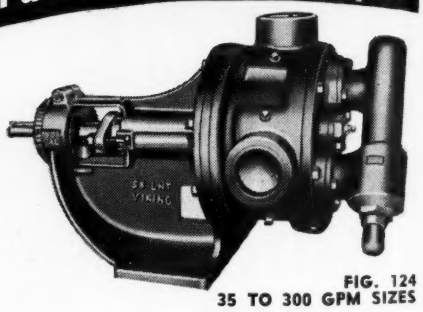
a business that has growing pains

Time and again over the past decade, LEXINGTON has become a financial godfather to business firms with growing pains, Time and again our plan of financing their accounts receivable has enabled them to become bigger and stronger until they are able to keep moving under their own steam.

worth looking into, isn't it?

LEXINGTON CORPORATION
M. S. LURIO, President
Fuel Financing from Maine to Maryland
10 Milk St., Boston, Mass. Liberty 2-6878
60 East 42nd St., New York, MUrray Hill 7-1148

IF IT'S SERVICE YOU WANT!
Specify... VIKING Truck Mounting Pumps



For rugged, year-in and year-out truck pump service, check the features of the Fig. 124 Viking pump.

FIG. 124
35 TO 300 GPM SIZES

1. Integral thrust bearing — controls distortion and end play.
2. Extra long stuffing box — leak resistant.
3. Revolvable casing for handy port location.
4. Double supported relief valve on head.
5. Pump operates equally well in either direction.
6. Positive, *fast* self-priming. No pulsation.

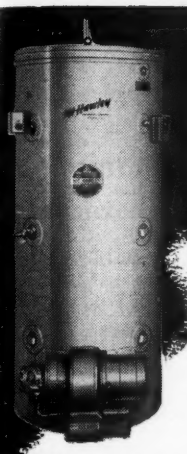
Write today for latest free bulletin 1507EE. Sent promptly on request.

VIKING
AN HONORED NAME IN PUMPING

See Our Catalog In SWEETS

Viking PUMP COMPANY
Cedar Falls, Iowa

PROFIT with Mt Hawley
THE COMPLETE VERTICAL BOILER LINE!
(With Efficient ST* Principle)



Ideal for Convector, Radiator or Radiant Panel Heating

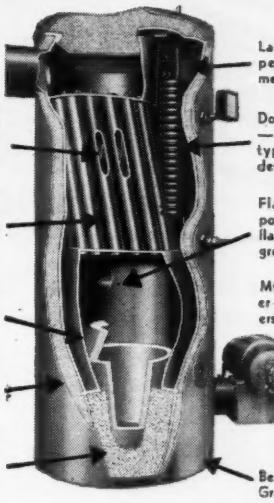
The Mt. Hawley line of gas and oil fired vertical boilers is available in eight sizes to meet every home and industrial heating need.

With the Mt. Hawley line, you are completely prepared to cash in on all types of business, thanks to the extensiveness of the line — quality of product — and competitive prices.

Richly styled, compact in size to save space, Mt. Hawley oil and gas fired boilers are real sellers — real goodwill builders — real money makers!

Write today for complete literature and prices. You'll be glad you did!

Consider THESE FEATURES



Large steam dome—permits fully submerged tubes.

Spinner Tube Inserts—retard hot gases—direct head to boiler water faster.

Domestic Water Coil—tankless or tank type—Mt. Hawley designed and built.

*Slanting tube principle. Extracts more heat—lowers stack temperature.

Flame observation port. Permits positive flame adjustment for greatest efficiency.

Combustion chamber baffle deflects heat to boiler water for greater economy.

Mt. Hawley oil burner—fully Underwriters' approved.

Extra heavy Banroc insulation—top and sides. Conserves fuel.

Four inch Vermiculite combustion chamber insulation permits wood floor installations.

Beautifully finished in Green Hammerloid.

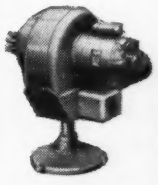
Mt Hawley OIL BURNERS

Model G-2 for smaller homes. .65 to 1.50 G.P.H.

Model G-4 for larger homes. 1.50 to 4.00 G.P.H.

Model G-6. 5.00 to 9.00 G.P.H.

Model G-8. 9.00 to 20.00 G.P.H.



FOR OIL OR GAS FIRING

Mt Hawley MFG. CO.
PEORIA 4, ILLINOIS

H M coM

NEW SKINNER DEVELOPMENT
for Domestic Oil Burners

NEW V2-500 TIME DELAY VALVE

HELPS ELIMINATE SOOT & BACKFIRES
★
SMALL & COMPACT WEIGHT ONLY 9 OZ.
★
SAFE & SURE
★
SAVES FUEL
★
UNDERWRITERS' APPROVED
★
LOW COST
★
PROMPT DELIVERY

This outstanding new Skinner development promises new customer satisfaction whether installed on new or old oil burners. The V2-500 operates as follows: After blower, motor and pump start, the valve delays 5 to 6 seconds before releasing oil. At end of heating cycle, valve closes instantly preventing combustion while motor, pump and fan coast to a stop. This assures adequate air volume at start of combustion cycle, improves draft and helps eliminate sooty conditions. Valve is two-way normally closed; rated at 115 p.s.i. max. Coil is continuous duty rated at 9 watts max. Write for details and low prices!

SKINNER ELECTRIC VALVES®
SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
141 Belden Ave., Norwalk, Conn.

PROFIT BY SELLING HEATING COMFORT!

GORTON VALVES

With GORTON VALVES every radiator is made to heat EVENLY and QUICKLY with OUNCES of vapor . . . instead of POUNDS of pressure.

Above: For steam mains and unit heaters.

At right: For radiators.

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GORTON HEATING CORPORATION
Since 1887 — Manufacturers of Heating Equipment
CRANFORD • NEW JERSEY

THE FINEST IN OIL HEAT

Shell-Designed Combustion Head

The highest combustion efficiency known to the Oil Industry!

High CO_2 absolutely No smoke No soot!

(Available to oil burner Manufacturers only)

To be Certain of a perfect installation every time, insist on the Shell-Designed Combustion Head on every burner you buy.

Engineers claim it to be the biggest single advance in oil burner design in 20 years.

MODERN DIE & MACHINE CO. 166 Pleasant St., Boston 25, Mass.

. . . . Largest burner Show

Bookbinder's Restaurant. It will be preceded by a Work Shop—an innovation on this year's program—for the Secretaries to be held at 3:00 P.M. Fred Beckwith, Oil-Heat Institute of New England, will be one of four speakers who will discuss problems and programs that Chapter Secretaries may find useful in the operation of their own local organizations. Beckwith will tell of "The problems in organizing schools for technical training."

On the same program, Harold Mottram, Wisconsin Oil Heat Association, is slated to give details of "Sales promotion and advertising for fueloil dealers," and John Morrison, Electrical Association of Philadelphia, has been assigned the topic, "Increasing the scope of the service of a trade association to its dealers." Fred Burroughs, National Secretary of the Distribution Division, the final speaker, is to outline the Division's objectives for 1952.

J. H. B. Albert, Chairman of the Distribution Division, will call the Dealer Day all-morning session to order on April 17. To emphasize the importance of the session to the oil-burner and fueloil dealer, Mr. Albert says, "What we all want to know is how to make more money, but we want to make more money in an industry kept decent and honorable and cleanly competitive and one in which we can see the stability that guarantees a profit when earned. It's true," he continues, "that in just the last decade our industry has made tremendous strides toward this objective, and not the least factors in achieving these seven-league steps have been the planning of a progressive industry trade association, the leadership of competent business men in the field of oilheat and the exchange of top-grade opinion among the industry, as at these Oil-Heat Convention Business Sessions."

Program for dealer day has been pegged on the "3-S's"—"Supply, Selling, Service." On the first topic, Joseph W. Butler, Butler Oil Corp. and Deputy Auditor General, Commonwealth of Pennsylvania, will talk on "The outlook for oil and cooperation with OIIC." On service, C. M. Blickensderfer, Sinclair Refining Co., will contribute his thoughts on "Service and public services" and two speakers will discuss sales efforts that the average dealer can adopt profitably. Frank J. Boyce, Ray Heat & Power Co., will tackle the subject from the angle of "Commercial-industrial sales" and Leslie A. Falk, Wisconsin Ice & Fuel Co., will explain "How to build domestic sales."

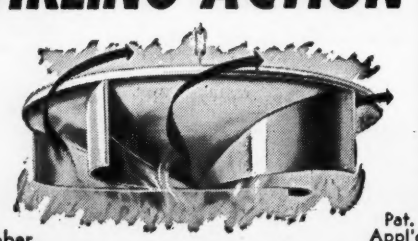
At the conclusion of this session, too, the speakers as a panel will answer questions on dealer problems that are asked from the floor.

Another innovation at this year's Show will place a premium on prompt attendance at the Engineering, Industry and Dealer Day sessions. Each person attending who arrives in advance of the scheduled opening time will be given a ticket, will fill in a detachable stub with his name and address, deposit the stub in a receptacle at the entrance to the meeting room and thereby become eligible to participate in a drawing for valuable prizes. The

DON'T JUST BAFFLE! GET SWIRLING ACTION TOO-

Every Conversion needs a FIRE-SWIRL BAFFLE.

Get the facts, clip this to your letterhead, or see your jobber.



Pat. Appl'd For

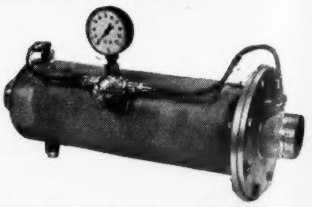
FIRE-SWIRL ZEH COMPANY INC., PASSAIC, N.J.

SELL FILTERED FUEL OIL

Micronic Filtration Without Expensive Alteration to Your Tank Truck!

Look at the advantages in customer sales appeal along with savings in maintenance costs:

- **Increases customer satisfaction.**
- **Reduces service calls.**
- **Protects truck equipment.**



Write For Details and Prices Now!

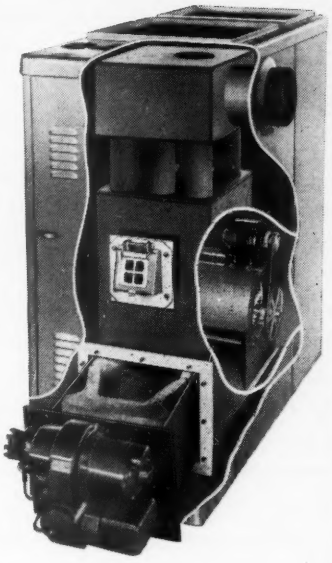
COOTE

CHAS. W. M. COOTE CO., INC.
336 Gregory Ave., West Orange, N. J.

Furblo

OIL FIRED WINTER AIR CONDITIONER

MORE PROFIT FOR DEALERS



Furblo units require less time to set up . . . combustion chamber is pre-set and burner is mounted and adjusted in sliding chamber drawer . . . 100% slip joints for easy casing assembly . . . no sheet metal screws, nuts, or bolts. Furblo time-saver features mean more dealer dollars!

MORE PROFIT in servicing Furblo . . . standard service charges can be made for less servicing time . . . Furblo units are easier and faster to service!

MORE PROFIT because of less sales resistance. Simplicity of design and high operation efficiency make Furblo units attractive to home owner . . . no technical knowledge required to understand unit operation. Economical to operate and maintain!

WRITE TODAY FOR PROFIT MAKING DETAILS

FURBLO CO., Pioneer Manufacturers

HERMANSVILLE, MICH.

KENT

DOUBLE SUCTION
FURNACE CLEANER

solves your toughest problems!

KENT HAS POWER
to do a thorough job as quickly as possible!

KENT FITS THE JOB
has no outside dust-bag, no dirt passes through fans!

KENT IS BUILT TO LAST
minimum time out for repairs assures maximum service!

COMPARE KENT!
It separates into 2 parts for easy carrying . . . has outlet at switch for extension light! See KENT before you buy!

Full Information upon Request

Visit KENT Booth 117, National Oil Heat Exposition, Philadelphia, April 14-18.

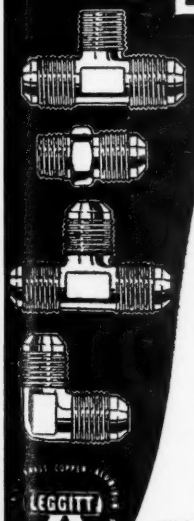
CLEAN WITH KENT EQUIPMENT

The KENT Company, Inc. • 434 Canal St. • Rome, N. Y.

SOMETHING NEW!

LEGGITT OIL TANK VALVE

This all brass valve with brass seat, is specially designed for direct connection between oil tank or drum and tube line to heater or furnace. One, two, or three tank hook-ups are accomplished very easily with a minimum of effort.



Always look to Leggitt for the newest in valves, filters, fittings, etc. — the BEST in BRASS at the MOST REASONABLE PRICES! Whether your order is large or small it will receive the same prompt and careful attention.

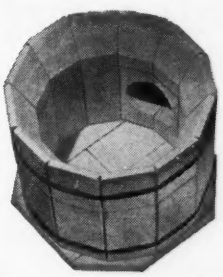
- GALVANIZED MALLEABLE IRON FITTINGS
- BRASS FITTINGS
- COPPER TUBING
- OIL FILTERS
- OIL VALVES

No. 18A32

Write for catalog and prices.

SOUTHWESTERN OFFICE & WAREHOUSE
San Marcos, Texas

S. H. LEGGITT CO.
325 N. E. High St.
MARSHALL MICHIGAN



The *Instant-Glo*

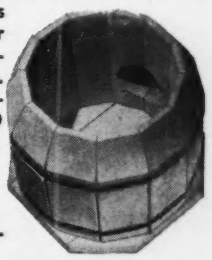
CUSTOM-BUILT INSULATING BRICK

COMBUSTION CHAMBER

The Top Quality Installation for Maximum Efficiency

INSTANT-GLO Combustion Chambers are made of special REFRACTORY INSULATING BRICKS which get hot 10 times faster than ordinary fire bricks insuring an INSTANT RED-HOT REFRACTORY SURFACE, resulting in immediate combustion efficiency—result, oil economy 15% greater than ordinary chambers. The insulating quality of the bricks also ELIMINATES LOSS OF HEAT into base of heater.

The round shape of INSTANT-GLO Chambers eliminates air pockets and produces LESS COMBUSTION NOISE than the usual fire brick chambers. Each part is taper cut like a keystone so that chamber can not fall in. The INSTANT-GLO Chamber can be installed in one hour or less. All components of each chamber carefully packed in special carton — NO BREAKAGE OR LOSS.



Junior or Junior A—.75 to 1.00 G.P.H.
No. 1 or 1A—1.00 to 1.35 G.P.H.
No. 2 or 2A—1.5 to 1.75 G.P.H.
No. 3—2.00 G.P.H.

Model 1A and 2A *(at right)* Special chambers for steel furnace installations.

Also Available—2600° INSTANT-GLO CHAMBERS IF REQUIRED

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

. . . . Largest burner Show drawing will take place at the annual banquet and winners will receive prizes including television sets, golf bags, fishing tackle, appliances and other gifts with a total retail value exceeding $1,500. Attendance on time at the sessions is the only requirement and the winner does not have to be at the banquet to win. He can either pick up his prize or arrangements will be made to forward it to his home.

A well rounded schedule of social and fraternal events also are planned for Show week. They begin on Tuesday evening, April 15, when the Old Timers Club holds its Annual Jamboree at Lulu Temple. Stan Czarnecki, Fred Haab and Curt Soderberg are completing arrangements for the traditional wild and wooly gathering.

Oil Heat Old Timers Club is sponsoring a similar affair for its members on the following evening, April 16, at Locust Cafe. Dan Bierman, Joe Ross, Herb Hellman and Walter Bernard comprise the committee in charge.

While details have not been completed, Jack Campbell of Elliott-Lewis Co. is working with a committee that is planning for the entertainment of the ladies who will attend the Exposition and Convention. Ladies' registration will take place on the first three days of the Show in the Lafayette Room of the Benjamin Franklin Hotel from noon to 4:00 P.M. Preliminary plans indicate there will be a choice of two tours on Tuesday, April 15, one to Philadelphia mansions and the other to historic spots in Old Philadelphia. A special program is being readied for that evening and the following day, Wednesday, a luncheon and style show will be the attraction. Mrs. H. E. MacAvoy is heading the committee of Philadelphia OHI member's wives in charge of arrangements for entertaining the ladies who will attend the Show.

The final event of the week, and the climax of the entertainment features, takes place on Thursday evening, April 17, with the holding of the OHI annual banquet and entertainment in the grand ballroom of the Benjamin Franklin Hotel. A. T. Atwill, Quaker Mfg. Co., and past-president of the Institute, will be toastmaster, to enforce the traditional edict against after-dinner speakers. He will supervise drawings for the prizes being awarded to those attending the general sessions, will introduce head table guests and then turn over the banquet to the variety show. Seven acts and an orchestra have been engaged for "an hour and a half of fun and frolic." A cocktail hour is to be held just before the banquet.

There are no sessions or meetings planned for Friday, April 18. On this the final day of the Show, the Exposition Hall at Commercial Museum will be open for the last five hours of the equipment displays from 1:00 P.M. to 6:00 P.M.

The Institute has undertaken a comprehensive publicity campaign to acquaint industry members with the activities planned for Show Week. Two copies of "OHI News" have been mailed to 18,000 dealers to give them advance details of the program. The Electrical Association of Philadelphia (OHI's local chapter), with the assistance of several major oil companies, raised a sizable fund to promote the

HomEase is the Burner that offers you the Exclusive

FLAME-IZER . . . *high CO_2 flame-fitting to the individual fire-box, quickly, easily!*

FIRE-STAT . . . *more starting air—thus less sooting and smoking on cold starts!*

MORE SALES.. GREATER PROFITS *easily!*

VARIOUS MODELS: .5 to 15 gph

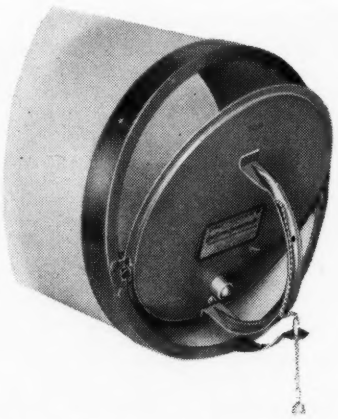
HomEase has an important place in thousands of homes . . . has thousands of satisfied owners . . . it should have an equally important place with *you*. Get the all-important facts, *Now*

HomEase Products Company

PATERSON 3, NEW JERSEY

HOMEASE

OUR REPRESENTATIVES SEE VOL. III THOMAS REGISTER



the Curtain Goes Up

to reveal the most complete line of draft controls for gas-fired heating plants. Tested and proved in hundreds of checked installations for over two years. This extremely sensitive double-acting control is far beyond the trial stage.

Without question . . . again the most complete line . . . full range of sizes . . . domestic and commercial . . . square or round.

Write us now for details

COLE-SEWELL *Engineering Co.*

2282 UNIVERSITY AVE. ST. PAUL 4, MINN.

A positive seal

for OIL • GAS
FREON • BUTANE
STEAM • WATER

Pipetite provides a positive seal for joints regardless of the type of fluid or gas being used. It is the dependable joint compound that makes good workmanship and assures user satisfaction. To be absolutely sure of "no leaks" use Pipetite. If your supplier does not have it . . . write direct.

LACO BRAND
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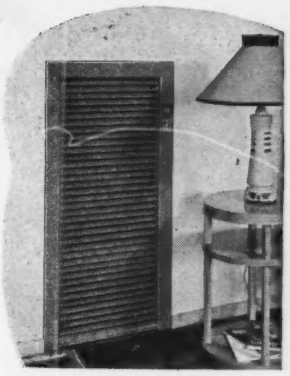
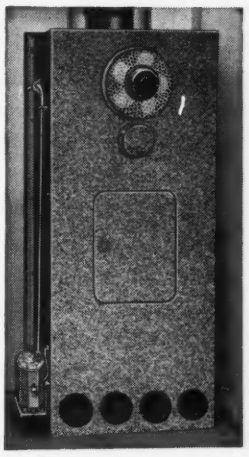
3050 W. W. Carroll, Chicago 12, Ill.

CASH IN ON THE SMALL HOME BUILDERS MARKET WITH



Silent Sioux



in the wall Oil Furnace

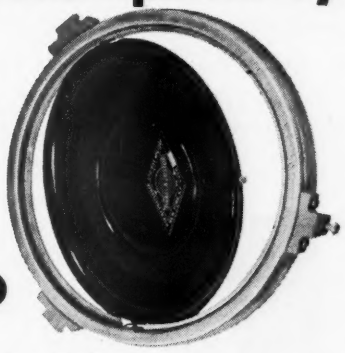
An ideal heating system for small and medium sized basementless homes. Thermostatically controlled forced circulation . . . 44,600 BTU/hr. Requires simple installation in utility room or alcove . . . all controls and access doors readily accessible. Easier to install and service than a floor furnace. For greater sales, stock up with Silent Sioux, write to:

Silent Sioux Corporation
Formerly Silent Sioux Oil Burner Corp.
Dept. FO42 Orange City, Iowa

PREFERRED
DRAFT-A-JUSTORS

Cut Fuel Consumption by

10% TO 30%



The *Preferred* Draft-A-Justor is the original, patented Draft-A-Justor . . . improved to include the latest in engineering developments.

Stainless steel ball bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES

Store, domestic and commercial sizes from 4" to 24" in diameter.

Industrial sizes from 2' x 2' to 5' x 12'.

PREFERRED UTILITIES MFG. CORP.
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

STANDARD EQUIPMENT on all THE BETTER BURNERS

Rajah
SPRING SNAP TERMINALS

FOR OIL BURNER SPARK PLUG IGNITION CONNECTIONS

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Made in Two Styles
CRIMP TYPE and SOLDERLESS

Code No. S/S No. 11

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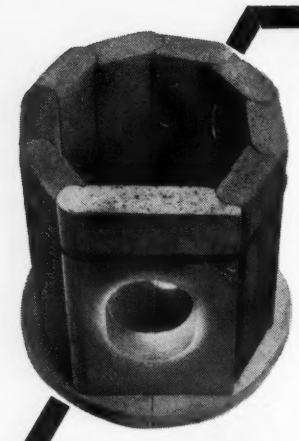
Send for Samples and Prices

Manufactured by
THE RAJAH COMPANY
Bloomfield, New Jersey



For quieter, faster-heating operation, specify

"NOCK" Combustion Chambers

"NOCK" Combustion Chambers are the original flexible type fire boxes manufactured of sound-absorbent acoustical brick which helps eliminate combustion noises. This strong, hi-temperature insulating brick is fast-heating —assures oil economy.

Interlocking style—requires no cementing. Can readily be sawed or notched to fit around grate lugs. Sizes available for firing rates up to 3.00 G.P.H. Packaged in single, convenient carton with or without insulating back-fill.

NOTE to Furnace Manufacturers: We will design and manufacture a flexible insulating type fire box to suit your requirements.

Write for full information today!

THE NOCK FIRE BRICK COMPANY

1243 East 55th St. **Cleveland 3, Ohio**

Show to the public. The Institute added an equal amount for the purpose of preparing cards on the front and back of street cars, newspaper advertising, television and radio spots, plus publicity to persuade oilheating prospects in the Philadelphia area to attend.

❖

Old Timers plan annual Jamboree in Philadelphia

THE ANNUAL JAMBOREE of the Old Timers' Club of the Oil Burner Industry will be held during Show Week on Tuesday evening, April 15 at Lulu Temple, 313 South Broad St., Philadelphia. Arrangements have been completed for a dinner-entertainment program in the traditional fashion.

The Old Timers will have a booth at the entrance to the Oil Heat Exposition at Commercial Museum where new applications, payment of dues and Jamboree reservations may be made. The booth will be open on Sunday, Monday and Tuesday, April 13-15.

E. N. McDonnell, treasurer, reminds the members that only active members are admitted and active means that dues for this year have been paid. Cost of a ticket for the Jamboree is $7.00, including cocktails and highballs.

J. W. Owens, national chairman, will conduct the "business" portion of the meeting, which can be described best as brief and informal.

Arrangements for the Jamboree have been made by Stan Czarnecki, Fred Haab and Curt Soderberg.

STOCK NOW—for Summer Service Calls!

This Summer you will have your big opportunity to do suggestive selling. Every service call can mean the sale of a Klemm Fuel Oil Filter. This handsome unit will appeal to your customers and the clincher of uninterrupted service and pure clean oil will put extra profit in your pocket. Place an order with your jobber today and have your men carry one on every service call for easy sales.

Model 430G

*Model 430 Metal Bowl

Klemm

AUTOMOTIVE PRODUCTS CO.

1718 N. Damen Ave., Chicago 47, Ill.

Listed by Underwriters' Laboratories

NOW is the TIME to "CLEAN-UP"

with a

GRAND RAPIDS FURNACE CLEANER

Act Now! Get in on this year's cleaning profits. *Order a Grand Rapids Furnace Cleaner.*

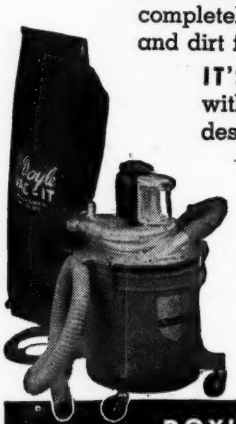
IT'S FAST— Handles twice as many jobs as the ordinary furnace cleaner.

IT'S THOROUGH — High velocity suction completely removes ashes, soot, scale and dirt from every type of heating plant.

IT'S COMPLETE — A packaged unit with practical cleaning attachments designed for fast, easy cleaning.

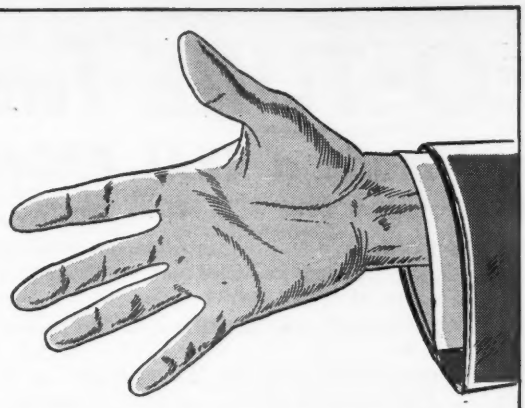
IT'S PROFITABLE—The trouble-free operation and speedy service of the Grand Rapids Furnace Cleaner puts extra profits in your pockets.

Send today for complete information about the Grand Rapids Furnace Cleaner.



DOYLE VACUUM CLEANER CO.

233 Stevens St., S.W. **Grand Rapids 7, Michigan**



Stop in and say "HELLO"

If you're going to be at the Oil Heat Institute Show, drop in and pay us a visit.

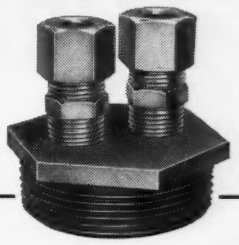
We'll be in Booth F and will be looking forward to meeting Gulf Solar Heat dealers and all our other good friends.

PLACE: Commercial Museum, Philadelphia
TIME: April 14-18 inclusive
BOOTH: F

GULF SOLAR HEAT

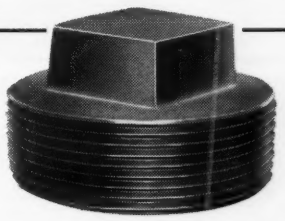
Gulf Oil Corp. • Gulf Refining Company

FOR FASTER FUEL TANK LINE INSTALLATIONS



THE NEW BUCKEYE DUPLEX TANK BUSHING

One tank opening does the work of two when you use the No. 857 DUPLEX TANK BUSHING. Just thread in the bushing unit and you're ready to connect both suction *and* return oil lines between burner and fuel tank. Installation is quicker, easier, more economical. Line fittings are machined brass. They can be removed from the cast iron body and replaced with plugs if desired. Bushing size is 2 inches; fittings and plugs are available in ⅜ or ½ inch sizes (any combination).



BUCKEYE No. 4084 TANK PLUGS
Available in these sizes: 2 inch (¾ lb.), 3 inch (1¾ lb.), 3½ inch (2½ lb.) and 4 inch (3½ lb.).

Buckeye

BUCKEYE IRON & BRASS WORKS, P. O. Box 833, Dayton 1, Ohio

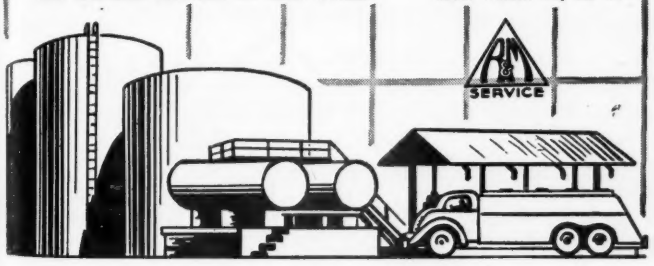
R & M SERVICE BUILDS PROFITS FOR OIL MEN

The *right* equipment in your plant means lower operating cost. You can depend on R & M men, with their intimate knowledge of marketing methods, plus various kinds of equipment, to help you select exactly what is best for your requirements.

RENICK & MAHONEY, INC.

Complete Equipment for the Oil Trade

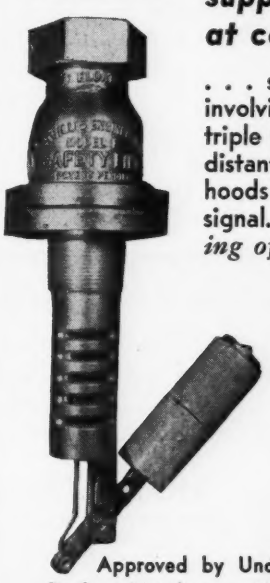
380 SECOND AVENUE AT 22nd STREET NEW YORK 10, N. Y.



Do YOU have "Problem Jobs"?

The McGILLIS SAFETY VALVE

automatically shuts off supply of oil into tank at correct level:



. . . solves problem job troubles involving long fill pipes, dual and triple tank installations, vent pipes distant from fill pipes, or neighborhoods too noisy to hear audible signal. *Prevents pressure shocking of tanks.*

Let the

McGILLIS SAFETY VALVE

improve service to your customers by eliminating the human accident factor while filling tanks.

Approved by Underwriters' Laboratories
Dealers, Distributors: Write for further information.

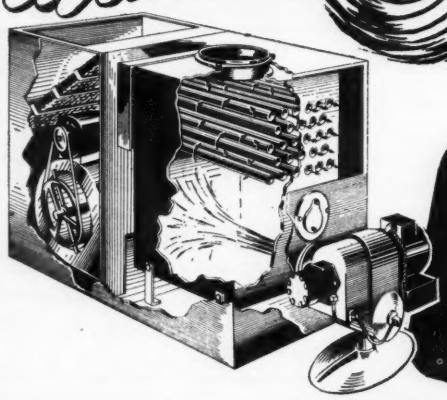
McGILLIS SERVICE ENGINEERING, INC.
1554 MAIN ST. BROCKTON, MASS.

Have YOU installed a.... TURB-O-TUBE Furnace

and made a REAL PROFIT?

ONE Installation Sells TEN MORE because of —

- **ECONOMY**—every bit of heat is utilized by patented tube construction
- **LOW INITIAL COST**—Inquire!
- **COMPACT, PACKAGED UNIT**—Factory assembled
- **CONVENIENCE**—all parts easily accessible
- **FIELD-PROVEN**—in sales, in customer satisfaction



THE FIRST NEW IDEA In Heat Transfer In Years! It's the Tubes That Do It!

VISIT OUR BOOTH #225 AT O.H.I.

TURB-O-TUBE FURNACE, Inc.

204-8 RHODE ISLAND ST. BUFFALO 8, N. Y.

Made in Canada by the Conroy Mfg. Co., St. Catherine, Ont.

List of Exhibitors

(*Begins on page* 70)

Space No.

Williams Oil-O-Matic Division (559)

Attending: From home office: H. W. Burritt, L. A. Casler, C. S. Stackpole, E. H. Davison, T. H. Green, A. L. Agne, M. V. Stagg, J. H. Shoemaker, H. C. Perry, R. C. Osborn, H. E. Earl, C. M. Pierson, M. P. Langdoc. From field personnel: H. H. Falkingham, H. H. Hurston, H. H. Hackett, J. H. Skaggs, R. A. Davis, C. A. Fisk, J. E. Nesbitt, V. D. Hucks, F. P. Merrels, W. C. Barrett, W. E. Pflieger, S. J. Dowling, R. F. Becker, C. G. Branch, N. A. Palmer.

Exhibiting: Complete line of winter air conditioning units; cast-iron and steel boiler-burner units; conversion oilburners.

Windmaster Corp. (122)

Attending: Dick Cullom, Bill Kemp, Wendell Franks, Bill Debler, Bud Hearn.

Exhibiting: Draft controls.

❖

William M. Roecker has been appointed manager of General Controls Co. branch office in Cleveland, O. Roecker joined General in 1947.

David A. Robinson has been elected by the board of directors as treasurer, Lexington Corp., Boston 8, Mass. Robinson had been serving as credit manager for the past year. Previously, he worked for Cambridge Rubber Co., The Texas Co. and Clark-Babbitt Industries, Inc.

William Maurer, Brightwaters, New York, will cover the Long Island counties of Nassau and Suffolk for REMOTAMATIC Control made by Scully Signal Co., Cambridge, Mass. REMOTAMATIC control is a device to eliminate needless oil truck engine and pump operation.

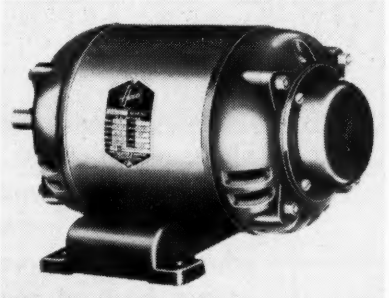
George R. Koeln, Atlanta 3, Ga., has been appointed by Dongan Transformer to represent its line in North and South Carolina, Georgia, Tennessee and Alabama.

New Products

(*Begins on page* 197)

in the mounting base. Not only will appearance be improved, but height problems where mounting space is critical will be eliminated and the condensers will be protected better from damage.

These motors, ranging in size from ¾ hp, 1140 rpm, to 3 hp, 3450 rpm, are built in standard NEMA frames, equipped with heavy-duty ball bear-



QUICKLY AND EASILY INSTALLED -- WRITE TODAY

REX RoTo Combustion Chambers

IN ANY STYLE FURNACE—WITH ANY MAKE BURNER

The user benefits through higher combustion efficiency and longer life. The installer through the easy and quick installations. No cutting or cementing necessary.

Instant COMBUSTION EFFICIENCY

Immediate SAVINGS

GET FULL INFORMATION

"NO BREAKAGE" PACKAGING

REX ROTO Combustion Chambers are individually packed in our exclusive TIME TESTED-CONSUMER APPROVED shipping container. It is designed to withstand numerous handlings.

EASTERN BRANCH REX CLAY PRODUCTS INC., ALBANY, N. Y.

REX RoTo CORP. 14400 DEXTER BLVD. DETROIT 6, MICHIGAN

Use "CRESCENT PARTS" Service

SERVING THE ST. LOUIS TRADE AREA

Authorized Fuel Unit Service Station

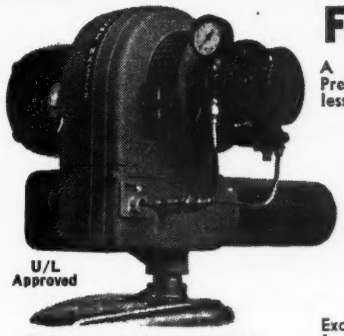
"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

STOKER AND OILBURNER PARTS

SEND US YOUR ORDERS OR INQUIRIES

CRESCENT PARTS AND EQUIPMENT CO., INC.

825-831 S. Boyle Avenue — St. Louis, Missouri



U/L Approved

20 year guarantee on NOZZLE

FLAME-MASTER

A new better and cheaper Low-Pressure Oilburner with twenty-two less parts.

- Easy to Install, Attractively Priced.
- Extra large orifice guarantees trouble-free nozzle operation.
- Lifts fuel from buried tanks.
- Complete atomization at low-pressures.
- High CO_2 ratings.
- Many other Patented features.
- Simple service requirements.

Exclusive dealer and distributor franchises now available.

Write for complete details at once

FLAME-MASTER CO., 6651 N. Clark St., Chicago 26, Ill.

Mfgrs. of High and Low Pressure Oil Burners

AQUA tester JA Indicates Water Level in Storage Tanks Instantly

Ask your jobber

$1.00 POST PAID

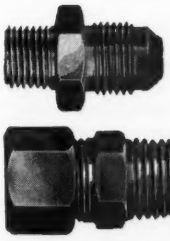
A small portion of this paste applied to the bottom few inches of a stick or tape and then inserted in the tank where the water is likely to appear will turn that portion of the stick into a vivid red.

Manufactured & Distributed by:

GASOILAIR EQUIPMENT CO. P.O. BOX 768, NEW HAVEN, CONN.

IMMEDIATE DELIVERY

Standard & Special Types of



Flare Fittings

Brass Nipples

Compression Fittings

from Stock

JOBBERS

MANUFACTURERS—

Write today for illustrated Catalog and Price List No. FA

RELIANCE TUBULAR PRODUCTS CO.

"Manufacturers and Fabricators of Aluminum and Copper Specialties and Brass Fittings"

9112 ST. CLAIR AVE. — CLEVELAND 8, OHIO

The Valves DON'T LIME UP

on NEW IMPROVED

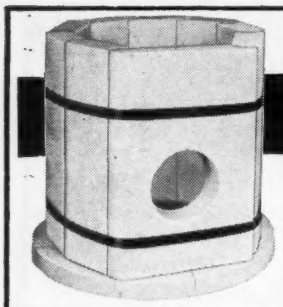
THERMO-DRIP *Automatic* HUMIDIFIERS

Valves are cradled in end of thermostat tube. Kept air tight. Water cannot spray. It is funneled. Even with valve wide open water runs smoothly. This overcomes clogging . . . liming up.

Water drops into pan only after it is hot. Each drop sizzles into steam as it strikes heated pan surface. This puts the MOST MOISTURE into air stream when it is MOST NEEDED.

Write today for complete information. FO-42

AUTOMATIC HUMIDIFIER CO. CEDAR FALLS, IOWA



FOR SATISFIED CUSTOMERS — INSTALL . . .

AMERICAN COMBUSTION CHAMBERS

100% "KILN-CURED" LIGHTWEIGHT REFRACTORIES

Equipment manufacturers are invited to bring their special design problems to us.

HIGH QUALITY

American Chambers are made from the finest, high grade refractory materials combined with proper "Kiln-curing". They will withstand 2500 degree temperatures and will not crumble in water.

EASY INSTALLATION

Controlled manufacturing and careful design of American Chambers makes for fast and easy installation. The flexible pieces fit together with a minimum of effort.

TOP PERFORMANCE

Because of the high quality of materials used in American Chambers they provide faster heat-ups, quieter burner operation and savings in fuel.

JOBBERS: Write today for price sheet.

AMERICAN CLAY FORMING CO.

TIFFIN, OHIO

ings and are for continuous operation with pumps, fans, blowers and similar uses. A special feature houses all parts of the centrifugal starting switch in an external dust-proof chamber.

Made by: The Hoover Co., Kingston-Conley Div., North Plainfield, N. J.

Quiet Automatic suspended Furnaces now number Five

WITH THE ADDITION of a 75,000 Btu model, five sizes of Quiet Automatic suspended furnaces now are available. The new size is intended for small homes, service stations and similar applications, may be installed in attics, basements or crawl spaces. Other sizes have capacities of 85,000, 142,000, 175,000 and 200,000 Btu.

Made by: Quiet Automatic Burner Corp., 33 Bloomfield Ave., Newark, N. J.

Smith cleat Benders for Ducts up to 20 Gauge

SMITH CLEAT BENDERS have been designed to function as two tools in one to form cleat edges in less than 5 seconds and drive-cleats in less than 8 seconds. It works like a bar folder, being able to make a bend and pinch it down. The bender also enters ducts of various widths and can be disengaged from the work, leaving it in a horizontal position throughout the bending cycle.

Two models are offered, for 12" and 18" long drive cleats for use with 12" or 18" wide pipe. Any size duct up to the width of the bender can be handled, and any thickness up to 20 gauge. The fingers of the bender are mathe-

Check our amazing VALUES on complete* FUEL OIL TRUCKS!

IMMEDIATE DELIVERY ANYWHERE
in the United States • Trades accepted and BUDGET TERMS ARRANGED

Side or rear installed equipment available on all tank sizes from 1300 gallon up to 2350

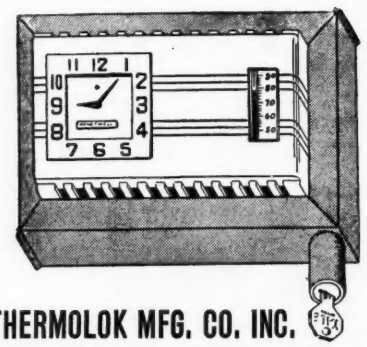
*Includes chassis, tank, pumping and metering equipment

Decker Brothers

Write for 1952 catalog to
300 LINCOLN AVENUE

HAWTHORNE, N. J. • HAwthorne 7-2100-01-02

Seen the new THERMOLOK models?



GUARDS THERMOSTAT SETTINGS

EASY TO INSTALL

- No nails or screws.
- No heat lock.
- No holes in wall.
- 15 seconds to install.

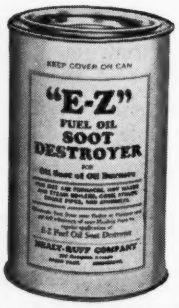
Models available for M-H, Penn, Perfex, Sampsel, Detroit Lubricator, and G.E. thermostats.
Write for name of your nearest jobber.

THERMOLOK MFG. CO. INC.

541 Rogers Ave.
Brooklyn 25, N. Y.

E-Z Extra PROFIT

Soot Destroyer



(*For fuel oil soot only.*) Keep a supply on every Service Truck. Sell cleaning jobs. Use *E-Z*. One application does a thorough soot cleaning job. Saves time. Pays extra profit. Sell one-lb. cans to customers. If your Distributor cannot supply you, order direct.

No. 1 Pkg. approx. 1 lb. . . . List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. . . List $4.50 ea.

Special discount to Distributors on quantities.

HEALY-RUFF COMPANY

797 Hampden Avenue • St. Paul 4, Minnesota

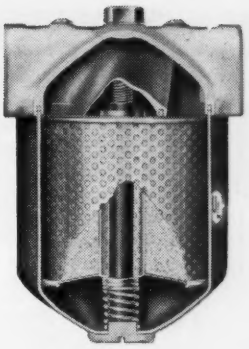
Get the burner that gets sales!

QUIET MAY OIL BURNER

Internationally known

MAY OIL BURNER *Division* MAY FUEL OIL CORPORATION
Baltimore 30, Maryland

Use the Filter Approved by 21 Oil Burner Manufacturers



Fram Fuel Oil Filters protect oil burner pump and nozzles from damage by dirt, rust, scale and water in fuel. • protect YOU from costly "nuisance" service calls. • are simple to install, need almost no maintenance. • are designed specifically for filtration of domestic oil burner fuels.

Write for complete details TODAY!

Fram Fuel Oil Filters are available in capacities of 2000, 4000 and 6000 gallons of oil consumed per year. Write to: FRAM CORPORATION, Providence 16, R. I.

FRAM FUEL OIL FILTERS

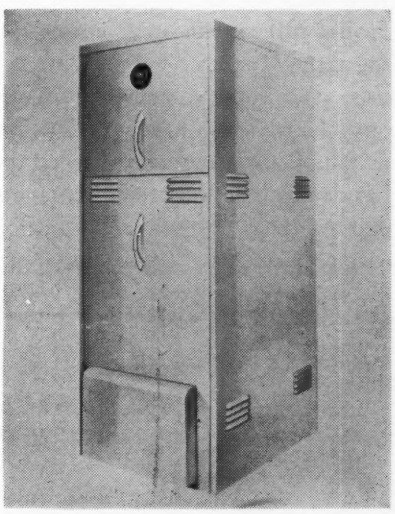
matically-spaced; the pinching down plate does not flatten the heel of the bend. No screwdriver is needed to make connections.

Made by: R. E. Smith, 1806 Belvidere St., Waukegan, Ill.

Conco adds another Ranchief furnace Unit

A RANCHIEF Counterflow furnace unit, 100,000 Btu capacity for homes up to 2,000 sq. ft., has been perfected for perimeter heating installations in the larger one-story basementless homes. The new model retains the same styling of other Ranchief models, is compact and finished in white enamel. Can be furnished for gas or oilfiring, using a high pressure burner.

This model is completely assembled and fire-tested at the factory, is shipped fully wired, including all controls. All wiring and operating parts are fully



enclosed. Designed for all types of perimeter systems, the addition of the new model brings to eleven the number of models in the Ranchief line.

Made by: Conco Engineering Corp., Mendota, Ill.

Grant Wilson Tape stops duct noise Vibrations

GRANT WILSON Flexi-Duct tape is recommended for use on main duct, branch and return lines in heating, air conditioning and ventilating systems and to isolate the bonnet or plenum from the furnace casing to prevent operation noises and vibrations from being transmitted through the duct system. The tape is fireproof and will not decay or become brittle. Both ends are selvaged to prevent fraying and unravelling.

The all-asbestos tape makes a tight, permanent joint, may be painted or left "as is." It is applicable to both new and old systems, is packaged in strong shipping carton in 50 ft. rolls, 6" wide. The tape is easily clamped, bolted, screwed or bonded in place.

Made by: Grant Wilson, Inc., 141 W. Jackson Blvd., Chicago 4, Ill.

FOR BETTER FIRES

IRON-HIDE

CHAMBERS-BAFFLES-SUPPORTS

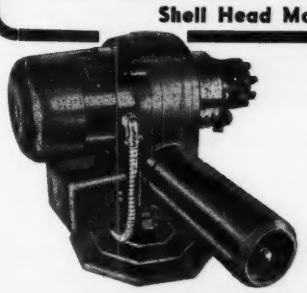
Write for details and prices NOW!

IRON-HIDE REFRACTORIES, INC.
DOCK STREET MATAWAN, N. J.

SINCE 1927

STANDARD AUTOMATIC OIL BURNERS

Shell Head Models Available



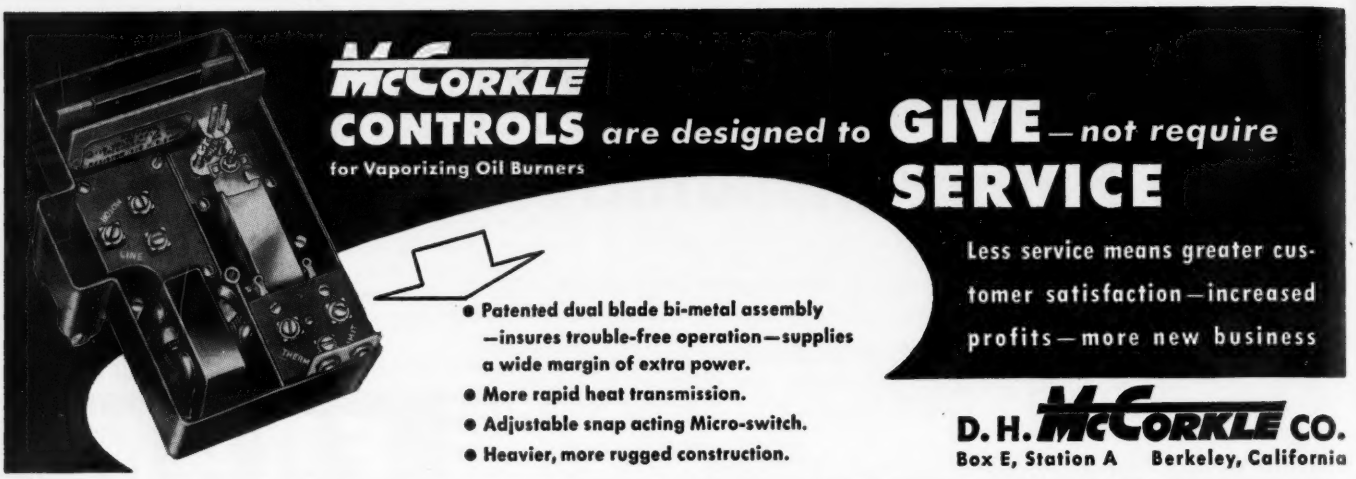
SAVES YOU MONEY TWO WAYS:
1. On Initial Investment.
2. On Service Calls.
BUY IT and TRY IT at Our Expense.

•

Write for Territory open in your Locality

Models from ¾ gal. to 20 gal. per hr.

STANDARD ARCOIL CORP.
21-23 Broad Street Newark 4, N. J.


McCORKLE
CONTROLS are designed to GIVE—not require SERVICE
for Vaporizing Oil Burners
Less service means greater customer satisfaction—increased profits—more new business
• Patented dual blade bi-metal assembly —insures trouble-free operation—supplies a wide margin of extra power.
• More rapid heat transmission.
• Adjustable snap acting Micro-switch.
• Heavier, more rugged construction.
D. H. McCORKLE CO.
Box E, Station A Berkeley, California

Oilheating Trends

(*Begins on page* 12)

cause supply was not adequate. Looking forward into March and the balance of the season not a single reporting company expects any supply trouble.

Stocks of No. 2 fueloil at refineries, terminals, and in transit East of the Rockies on March 8 were 42,545,000 barrels compared with 36,275,000 on the corresponding date last year. For the East Coast alone the comparison is 15,019,000 barrels on March 8 and 13,779,000 barrels the previous year.

WEIGHTED DEGREE DAYS: The regular method of reporting degree days for principal cities is useful to marketers in those specific areas but the system has little significance when planning supply for a large region. Economists at Socony-Vacuum Oil Company, New York, have developed a method of applying the published degree day figures to specific areas, related to their importance as fueloil consuming markets. For example, every county in the state of New York is identified with the degree days of either Buffalo, Albany or New York City. This same practice is followed in all states so that all consumption is tied to some city having published degree day data. The result is an overall weather calculation for District I and District II. On this weighted basis District I (East Coast) to the end of February has had a season 8.4% warmer than normal. District II (Midwest) has been .2% warmer than normal this season to February 29.

THE Quality BURNER THAT PROTECTS YOUR PROFITS
• A SIZE FOR EVERY JOB CAPACITY .75 TO 20 G.P.H.
• ADAPTOR FLANGES TO FIT BOILER AND FURNACE UNITS
SILENT KORTH OIL HEAT
MODEL HG-K ON DISPLAY AT THE
O H I SHOW, BOOTH 903 • APRIL 14-18
ECKHART MFG. CO., INC. UNION NEW JERSEY

AMERICAN IDEAL-AIRE
OIL-FIRED WARM AIR FURNACES
EXCLUSIVE DISTRIBUTORSHIPS AVAILABLE

on a complete line of quality heating furnaces: Suspended Units, Lo-Boys, Hi-Boys, and Counterflows. Capacities: 85,000 to 600,000 B.T.U.s.
These units have important and exclusive selling features. *Priced right.*

Send for full details now!

AMERICAN IDEAL-AIRE CORP.
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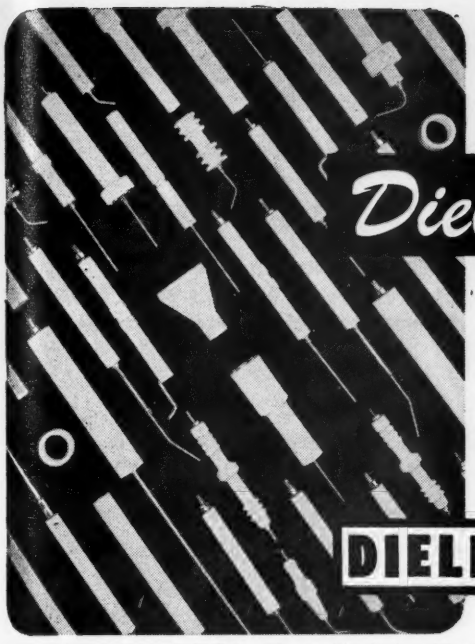
Get Complete, Trouble-Free
COMBUSTION TESTING

Write Today for Details on new VECO gas analyzer cell. CO_2 analyzing elements sealed in glass. Single meter, 3-in-1 operation for CO_2 Indicator, Stack Thermometer, Draft Gauge. Compact, portable, weighs 7 lbs. Service-free, simple to use.

VICTORY ENGINEERING CORPORATION
744 Broad Street Newark, New Jersey
Manufacturers of all types of thermistors



85% YEAR AFTER YEAR OF ALL NEW OIL BURNERS ARE EQUIPPED WITH...

Dielectric IGNITION ELECTRODES

For many years DIELECTRIC ignition assemblies have been the overwhelming choice for new burners or as replacements. They're ahead for 5 big reasons:

BETTER SERVICE ON NEW DESIGNS • QUICK DELIVERY OF STANDARD PARTS
AUTOMATIC PRECISION PRODUCTION • HUNDREDS OF STYLES • LOW PRICES

DIELECTRIC electrodes are the finest available in standard types and in special sizes and shapes, all UNDERWRITERS' approved.

DIELECTRIC also makes high tension cable assemblies and bus bars for transformer and electrode layouts for any burner hookup.

Go DIELECTRIC and you'll never again settle for lesser quality or service.

DIELECTRIC PRODUCTS CO., Inc., 125 Virginia Ave., Jersey City 5, N. J.

. . . . Oilheating Trends

We plan to publish this Socony weighted degree day index each month. The index is a very good measure of fueloil requirement.

DEALER COMMENTS: Typical comments on questions of the month are these: . . . "The pending oil strike keeps our phone busy and customers worried" . . . "Outside tanks above ground are not allowed in our market" . . . "Our fire law states that a 275 gallon oil tank above ground must be 15 feet from the building; not a favorable installation" . . . "Our oil supplier asked us to take no more No. 2 because of shortage but another supplier has given us all we need" . . . "Relative to tanks outside above ground we have strict regulations, and only in special circumstances can a dealer get permission to make such installations" . . . "Poor installation of oilburners is getting worse" . . . "They are planning strike of workers in West Virginia that may cut off gas supply to Washington area; news like this certainly does the gas company no good" . . . "The OPS has been playing political football with the oil dealers' requests for adjusted margins and we are plenty sore about it" . . . "Municipal ordinances preclude tank installation above ground" . . . "The real push on gas equipment sales is yet to come here; we expect an oil price increase and believe this is very bad policy at this time" . . . "We are expecting a big year for installations; there are no shortages and prices are dropping on cast iron and steel products" . . . "PSC hearings are giving gas the first unfavorable publicity since natural gas came to our territory" . . . "We specialize in industrial work and things are very slow" . . . "The only gas complaints we hear are its high cost but very few people replace it" . . . "Gas outsold us last year 2 to 1 in our market; looks like it will be the same in '52 if they stay open" . . . "To help defeat gas competition, burner manufacturers should provide a great deal more direct mail advertising for the prospect; I am willing to pay for this literature but cannot get any cooperation from my own factory" . . . "In our market gas is only allowed for new home construction but about 100% use it" . . . "Gas is cheaper than oil in our market but the cost of a conversion installation including liner, draft control, etc., is considerably higher than oil equipment; I say if you put in gas, install a complete unit" . . . "We are finding all materials available now without delay"

A. R. Webber Co. Inc., Has

EVERYTHING FOR THE HEATING And OIL BURNER TRADE

FREE! Write for Webber's 1951-1952 Catalog. It's Fully Illustrated and Priced.

A. R. WEBBER CO., INC.
424 Howard Ave., New Haven, Conn.

ODOR-GO

Eliminates Fueloil Odors and Stains Due to Spills

Efficient and Economical to Use

ALSO:

SOOT-GO for Cleaning Oil and Gas-fired Heating Plants

SLUDGE-GO for Cleaning Fuel Oil Tanks and Will Emulsify Water.

EZ-E WELD for Sealing Leaky Boilers. No After Odor. No Draining.

RUST-GO for Cleaning Sick Boilers. No Draining Necessary. WRITE FOR NAME OF NEAREST JOBBER

KALMIDE CHEMICAL CO., INC.
17 East 42nd St. New York 17, N. Y.

Don't miss ALLIED at the OHI Convention!

AMERICA'S NO. 1 TANK & TRAILER TRUCKS

designed with YOU in Mind!

EXCLUSIVE ALLIED FEATURES

- Recessed Gravity Meter • 2 Way Hose Exits
- Removable Panels • Welded Pipe Joints

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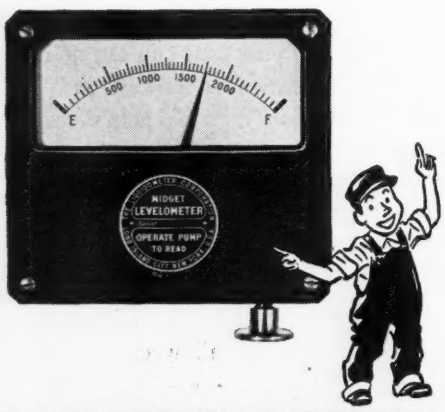
TANK TRUCK EQUIPMENT CO.

24th & Brown Sts.
Phila. 30, Penna.
Telephone . . .
STevenson 7-1664

A GOOD GAUGE COMPLETES A GOOD INSTALLATION



LEVELOMETER
Tank Gauges
"THEY'RE ALWAYS DEPENDABLE"

"LIQUIDS WORTH STORING ARE WORTH MEASURING"

THE LIQUIDOMETER CORP.
36 19 SKILLMAN AVE., LONG ISLAND CITY, N.Y.

DEGREE DAY TABLES

ONE MONTH ONLY — February Normal	1951	1952	Percent Change*		SEASON TO DATE (Sept. 1 to Feb. 29) Normal	1951	1952	Percent Change*
1174	1057	1094	— 6.8	Albany	4862	4781	4990	+ 2.6
568	489	459	— 19.2	Atlanta	2405	2478	2108	— 12.3
844	749	681	— 19.3	Baltimore	3413	3154	2965	— 13.1
1027	841	935	— 8.9	Boston	4215	3640	3894	— 7.6
1168	1045	1036	— 11.3	Buffalo	4772	4593	4641	— 2.7
1085	1007	904	— 16.7	Chicago	4539	4544	4482	— 1.2
905	797	728	— 19.5	Cincinnati	3806	3644	3370	— 11.4
1074	949	925	— 13.8	Cleveland	4389	4262	4040	— 7.9
445	423	308	— 30.8	Dallas	1985	1918	1589	— 19.9
900	776	812	— 9.7	Denver	4198	3694	4096	— 2.4
1143	1380	942	— 17.6	Des Moines	4893	5334	5188	+ 6.0
1141	1038	1031	— 9.6	Detroit	4738	4643	4599	— 2.7
1150	1027	1004	— 12.7	Grand Rapids	4855	4694	4743	— 2.3
1062	906	960	— 9.6	Hartford	4425	4081	4255	— 3.8
1155	1109	1216	+ 5.2	Helena	5566	5848	6540	+ 17.5
253	195	176	— 30.4	Houston	1129	1088	818	— 27.5
982	915	817	— 16.8	Indianapolis	4139	4207	3877	— 6.3
921	839	737	— 19.9	Kansas City	3881	3822	3850	— 0.8
232	235	182	— 21.5	Los Angeles	891	753	1004	+ 12.6
824	767	699	— 15.1	Louisville	3432	3516	3259	— 5.0
1181	1154	1043	— 11.7	Milwaukee	5025	5395	5278	+ 5.0
1379	1327	1192	— 13.5	Minneapolis	5981	6246	6245	+ 4.4
251	234	166	— 33.8	New Orleans	1045	1047	784	— 24.9
958	790	821	— 14.3	New York	3842	3371	3395	— 11.6
1098	1008	886	— 19.3	Omaha	4695	4795	5016	+ 6.8
881	762	752	— 14.6	Philadelphia	3542	3286	3160	— 10.8
971	828	809	— 16.7	Pittsburgh	4042	3836	3586	— 11.3
1184	1046	1123	— 5.1	Portland, Me.	5082	4857	5178	+ 1.8
622	559	642	+ 3.2	Portland, Ore.	3073	2784	3140	+ 2.1
1032	807	915	— 11.3	Providence	4292	3598	3779	— 11.9
723	703	662	— 8.4	Roanoke, Va.	3165	3345	3120	— 1.4
865	800	701	— 18.9	St. Louis	3593	3764	3472	— 3.3
868	751	981	+ 13.0	Salt Lake City	4176	3625	4385	+ 5.0
340	353	365	+ 7.3	San Francisco	1734	1508	1893	+ 9.1
1478	1333	1308	— 11.5	Sault Ste. Marie	6284	6234	6341	+ 0.9
644	582	602	— 6.5	Seattle	3221	2911	3118	— 3.2
1090	1039	995	— 8.7	Toledo	4553	4737	4548	— 0.1
842	725	679	— 19.3	Washington	3496	3132	2958	— 15.4

*Compared with normal.